New and interesting records for the Obi archipelago (north Maluku, Indonesia), including field observations and first description of the vocalisation of Moluccan Woodcock *Scolopax rochussenii*

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Summary.—The avifauna of the Obi archipelago is rather poorly studied and current understanding is essentially based on several historic collecting efforts and few recent visits by modern ornithologists, none of which reached the mountains above 750 m. Furthermore, the taxonomic position of many bird populations restricted to the archipelago or shared with nearby Bacan Island remains confused. We describe the results of a two-week avifaunal survey of Obi in March 2010. We provide first records since 1982 of the poorly known Moluccan Woodcock *Scolopax rochussenii* as well as the first description of its vocalisation and first information on its habitat, which, contrary to what was previously speculated, includes lowland forest. We also provide confirmed records of five taxa previously unknown on the island, including one that possibly represents a new subspecies (Sulawesi Myzomela *Myzomela chloroptera*). New elevational information is presented for 34 species. Comments on the taxonomy of several endemic taxa are made on the basis of new vocalisation or photographic material, suggesting that at least two deserve biological species status (Northern Golden Bulbul *Thapsinillas longirostris lucasi*, Dusky Myzomela *Myzomela obscura rubrotincta*) and offering further support to treat Cinnamon-breasted Whistler *Pachycephala johni* as a species. Finally, we emphasise the need for taxonomic reappraisal of several other endemic insular forms (Cinnamon-bellied Imperial Pigeon *Ducula basilica obiensis*, Violet-necked Lory *Eos squamata obiensis*, Red-cheeked Parrot *Geoffroyus geoffroyi obiensis*, Hair-crested Drongo *Dicrurus hottentotus guillemardi*, Northern Fantail *Rhipidura rufiventris obiensis*, Paradise Crow *Lycocorax pyrrhopterus obiensis* and Island Leaf Warbler *Phylloscopus poliocephalus waterstradti*). Although most of our observations await confirmation, they suggest that endemism on Obi at the species level is perhaps significantly under-estimated.

Obi and its satellite islands of Bisa, Tapat, Obilatu, Gomumu and Tobala form a remote oceanic archipelago in Maluku, 33 km south of Bacan, 100 km east of Mangole (Sula Islands) and 125 km north of Seram (Fig. 1). Total surface area is 3,040 km^2 with Obi (2,670 km^2) the largest island, predominantly hilly and rising to at least 1,558 m. Together with the three large islands of Morotai, Halmahera and Bacan, and several smaller islands, the Obi archipelago forms part of the Northern Maluku Endemic Bird Area (EBA 171) distinguished by 32 species and 101 subspecies restricted to this region (following Gill & Donsker 2012).

To date, the resident avifauna of the Obi islands group is known to support 16 Northern Maluku endemic species shared with both Bacan and Halmahera. Only two endemics currently recognised at species level are confined to Obi (Carunculated Fruit Dove *Ptilinopus granulifrons* and Cinnamon-breasted Whistler *Pachycephala johni*), but the archipelago also hosts 19 recognised endemic subspecies, e.g. Paradise Crow *Lycocorax*

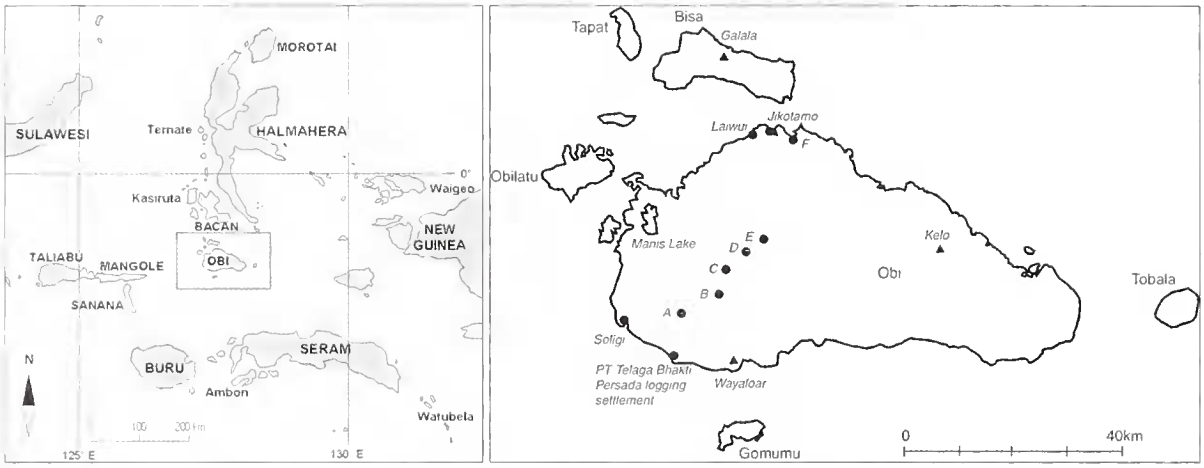


Figure 1. Location of Obi in eastern Indonesia and localities visited or mentioned in the text.

pyrrhopterus obiensis, while the enigmatic Moluccan Woodcock *Scolopax rochussenii* and two subspecies (Chattering Lory *Lorius garrulus flavopalliatus* and Island Leaf Warbler *Phylloscopus poliocephalus waterstradti*) are shared only with Bacan and Kasiruta (White & Bruce 1986). Interestingly, the Obi islands also host endemic subspecies of several residents that, according to current knowledge, do not occur elsewhere in northern Maluku: Pale Cicadabird *Coracina ceramensis hoogerwerfi*, Northern Fantail *Rhipidura rufiventris obiensis*, Turquoise Flycatcher *Eumyias panayensis obiensis* and Hair-crested Drongo *Dicrurus hottentotus guillemardi*.

Despite its distinctive avifauna but as a result of its remote situation, Obi has received little attention from modern ornithologists. Bernstein was the first bird collector to visit the island in 1862 (Jansen 2008) followed by Guillemard in 1883, Doherty in 1897 (the latter also visiting Bisa), Lucas in 1898 and Waterstradt in 1902 (Hartert 1903a). Following a gap of 50 years, an expedition from the Museum Zoologicum Bogoriense was conducted under the leadership of Wegner in July–November 1953 (Mees 1982) and its results published by Jany (1954, 1955). Further specimens were collected in 1981–83 by Momou and Tatu, during expeditions organised by the Smithonian Institution with the assistance of the Indonesian Nature Conservancy, as part of ethnobiological research conducted by Taylor (1990). These specimens were deposited at the National Museum for Natural History (NMNH), Washington DC. In December 1989 Linsley (1995) conducted a bird survey as part of a collaborative project between Manchester Metropolitan University, the Indonesian Institute of Sciences (LIPI) and the Directorate-General for Forest Protection and Nature Conservation (PHPA). He observed nine species not previously reported on Obi and provided the first ecological information for many taxa and descriptions of the vocalisations of several endemic forms. A brief exploration of Bisa was conducted on 11 June 1990 by Bishop (1992). Further ornithological observations were made in February 1992 by Lambert (1994) during a one-month survey of parrots under the auspices of IUCN; eight species were recorded on Obi for the first time. While maximum elevations reached by the earlier collectors are undocumented, Linsley (1995) and Lambert (1994) managed to reach *c*.500 m and 730 m, respectively. The basic ecology of a large suite of species remains poorly known and the rate of new island records hints that the avifauna is still poorly documented. This, together with the paucity of records for the enigmatic Moluccan Woodcock, encouraged us to undertake a short expedition to the island with the aim of improving knowledge of its avifauna.

Study area and Methods

On 7–21 March 2010, observations were made at ten sites on Obi. Details of these, survey dates and habitats are provided in Table 1 and Fig. 1. As many days as possible were spent above 800 m (10–16 March) and we eventually reached forest between 1,000 and 1,220 m on 13–16 March. Elevations and geographical coordinates were measured using a Garmin eTrex Vista HCx GPS. Subsequently, elevations and geographical data collected in the field were compared with satellite data available via Google Earth and some minor elevation corrections were made. It is of note that the highest elevation of 1,558 m given for Obi by Google Earth satellite data contradicts both the US Army map SA-52 1:1,000,000 (1968) and that in Coates & Bishop (1997), where 1,611 m is given as the highest elevation.

To support identifications and descriptions, MT took photographs using a Canon 40D digital camera with a 100–400-mm lens. Sound-recordings were made by MT using an Edirol R09-HR digital recorder with inbuilt microphone. Sonograms were prepared using Syrinx 2.6h by John Burt (available at www.syrinxpc.com). Recordings of Moluccan Woodcock have been uploaded to www.xeno-canto.org and further recordings will be uploaded to this online database.

Recent state of natural habitats on Obi

F. G. Rozendaal *in* Collar & Andrew (1988), Linsley (1995) and Vetter (2009) already reported that much of the lower lying forest on Obi was logged during the 1980s and early 1990s, while much of the remainder is under logging concession. According to Vetter (2009), Obi has suffered some of the largest reductions of lowland forest within north Maluku as a result of plantation development. In addition, illegal gold mining was reported to be destroying some areas of forest (F. G. Rozendaal *in* Collar & Andrew 1988).

Three logging companies, PT Poleko Yurbarson Trad., PT Telaga Bhakti Persada and PT Pusaka Agro Sejahtera, currently run six large logging licences covering two-thirds of Obi. These licences generally permit selective logging up to *c*.100 m^3 / ha and for *c*.20–30 years (N. Brickle pers. comm.). Along the 70-km stretch of coast between Jikotamo and the

TABLE 1
Study site details, survey dates and habitat. See also Fig. 1.

Location (elevation)	Coordinates	Dates	Habitat
Soligi (sea level)	01°39′S, 127°25′E	7–8, 20 March 2010	Village; coconut plantation and other tree crops; mangrove
PT Telaga Bhakti Persada logging settlement (sea level)	01°42′S, 127°29′E	19 March 2010	Village; coconut plantation; grassland
Site A (200–300 m)	01°38′S, 127°30′E	19 March 2010	Logged forest
Site B (360–450 m)	01°36′S, 127°33′E	8, 17–19 March 2010	Logged forest
Site C (400–700 m)	01°33′S, 127°34′E	8, 9, 16–17 March 2010	Logged forest
Site D (700–850 m)	01°32′S, 127°35′E	9–13, 16 March 2010	Logged and primary forest
Site E (850–1,220 m)	01°32′S, 127°37′E	13–16 March 2010	Logged and primary forest including montane forest
Laiwui (sea level)	01°19′S, 127°38′E	20–21 March 2010	Village; coconut plantation; beach
Jikotamo (sea level)	01°20′S, 127°39′E	20–21 March 2010	Village
Site F (50–150 m)	01°21′S, 127°40′E	20–21 March 2010	Logged forest; regrowth forest; coconut plantation; grassland

PT Telaga Bhakti Persada logging settlement south of Soligi, hills were mainly covered by plantations (including cloves, coconut palm, nutmeg, ambarella and cacao) and fragmented secondary forest. Hills separating Manis Lake from the west coast were barren as a result of ongoing open-cast nickel mining. Remnant primary forest was mainly restricted to the most rugged and inaccessible terrain. Alluvial flats were extensively covered by coconut plantations, with the notable exception of a relatively large tract of coastal forest bordered by old-growth mangrove immediately north of Soligi.

Within the PT Telaga Bhakti Persada logging concession south and east of Soligi, forest was very degraded below 200 m, large areas had already been selectively logged up to 950 m and the lowest patch of primary forest was at 500–700 m, although some large trees there were marked for logging. At 700–950 m, forest was in better condition, with fragments of primary forest still covering some of the steeper, less accessible slopes, while the more accessible areas were mainly covered by selectively logged forest. A small area of tropical forest explored at 1,100–1,220 m showed no evidence of logging.

Soligi villagers reported that tree-plantation operations were planned by the logging company and a tree nursery was seen in the concession. Several drill holes excavated during recent mining exploration were found well inside the logging concession up to 600 m. According to some villagers, these have to date not resulted in any further mining. It is of note that in the north of the island, a large-scale drilling project was withdrawn in September 2011. It was initially set to target a large epithermal gold / silver / base metals system under a license covering 7,700 ha, which is already the subject of extensive artisanal gold mining (Ashburton Minerals Ltd. 2012).

To our knowledge, Obi lacks any protected area, although a nature reserve of 450 km^2 covering highlands in the centre of the island and further protection forests on steep terrain have been proposed (FAO 1981–82, BirdLife International 2013).

Species accounts

Overall we recorded 74 bird species, of which 66 are resident or presumed so and eight are Palearctic migrants. Three additional taxa are either unconfirmed or remain unidentified to species. The following details new island records, new elevational or noteworthy records from a distributional, ecological or taxonomic perspective. Other species encountered during our survey are listed in Table 2. Taxonomy and nomenclature follow Gill & Donsker (2012) except that we use Common Golden Whistler *Pachycephala pectoralis* instead of Black-chinned Whistler *P. mentalis*.

MOLUCCAN WOODCOCK *Scolopax rochussenii*

The following records were obtained at site B at *c*.420 m, from a logging track bisecting an extensive area of logged forest on flat and more graded sandstone soils: at *c*.19.00 h on 17 March 2010, calls reminiscent to those given in display-flight by Bukidnon Woodcock *S. bukidnensis* were briefly heard (OP, MT & PDR). Between 02.00 h and 04.00 h on 18 March 2010, similar calls were repeatedly heard by OP and subsequently at 05.55 h and 06.07 h by the three observers, when sound-recordings (www.xeno-canto.org/109282, www.xeno-canto.org/109283) and a glimpse of a fast-flying bird were eventually obtained at dawn by MT. At 07.00–07.15 h (before dusk) on the same day, what was presumably the same bird was observed three times by MT, when it called in roding (i.e. courtship) display-flight at the same location. It was flying rather straight, rapidly and low above the canopy, sometimes <100 m from the observer, and was briefly seen opening its bill when calling. Rock Dove *Columba livia*-like size, overall compact stocky shape, with a rounded bulky chest, short tail, broad pointed wings and a very long straight bill were noted. These characters, together

TABLE 2
Species encountered on Obi not mentioned in the main text.

Species name	Comments
Dusky Megapode *Megapodius freycinet*	1 at *c.*150 m
Pacific Reef Heron *Egretta sacra sacra*	1 on the coast
Striated Heron *Butorides striata*	1 on the coast
Eastern Cattle Egret *Bubulcus coromandus*	few seen on the coastal plain
Eastern Osprey *Pandion cristatus*	singles seen twice near sea level; presumably resident
Pacific Baza *Aviceda subcristata rufa*	1 near sea level
Brahminy Kite *Haliastur indus*	quite common from sea level to 200 m, with additional records to 1,200 m
White-bellied Sea Eagle *Haliaeetus leucogaster*	4 on coast
Oriental Hobby *Falco severus*	1 at Soligi
Spotted Kestrel *Falco moluccensis*	common in coastal plain
Common Sandpiper *Actitis hypoleucos*	3 near Soligi
Red-necked Phalarope *Phalaropus lobatus*	common in coastal seas, with 600–1,000 from boat between Soligi and Jikotamo
Greater Crested Tern *Sterna bergii*	*c.*10 seen inshore between Soligi and Jikotamo
Pied Imperial Pigeon *Ducula bicolor*	2 in coconut / coastal forest near Soligi
Great-billed Parrot *Tanygnathus megalorhynchos*	2 near sea level in degraded forest and coconut plantation near Soligi, 1 heard near Laiwui
Barking Owl *Ninox connivens rufostrigata*	1 photographed at site F at *c.*100 m
Large-tailed Nightjar *Caprimulgus macrurus schlegelii*	seen twice at 400–500 m
Glossy Swiftlet *Collocalia esculenta*	from sea level to 940 m
Moustached Treeswift *Hemiprocne mystacea confirmata*	three records at 300 m, 480 m and 600 m.
Common Paradise Kingfisher *Tanysiptera galatea obiensis*	1 seen at site F
Blue-and-white Kingfisher *Todiramphus diops*	-
Beach Kingfisher *Todiramphus saurophagus*	common on coast around Soligi with, e.g. 9 from a boat along 8 km of coast
Common Kingfisher *Alcedo atthis*	1 (*A. a. hispidoides*) at 480 m; 1 (possibly migrant *A. a. bengalensis*) on coast
White-bellied Cuckooshrike *Coracina papuensis*	6 records from sea level to 420 m
Willie Wagtail *Rhipidura leucophrys*	-
Torresian Crow *Corvus orru*	1 near sea level near Jikotamo
Arctic / Kamchatka Leaf / Japanese Leaf Warbler *Phylloscopus borealis / examinandus / xanthodryas*	several encounters from sea level to 1,000 m
Gray's Grasshopper Warbler *Locustella fasciolata*	3 at 750–840 m
Moluccan Starling *Aplonis mysolensis*	fairly common to 450 m
Grey-streaked Flycatcher *Muscicapa griseistricta*	quite common migrant, from lowlands to 990 m
Black-faced Munia *Lonchura molucca*	flock of 30 at 220 m and 2 more at 360 m
Eastern Yellow Wagtail *Motacilla tschuschensis* ssp.	1 at site F
Grey Wagtail *Motacilla cinerea*	5 records

with the flight behaviour, are typical of *Scolopax*. MT also noted that the bird appeared to be significantly larger than congenerics with which he had previous experience (Eurasian Woodcock *S. rusticola* and *S. bukidnonensis*), but light conditions were too poor to observe any plumage characters. At 06.02–06.20 h on 19 March 2010, still in poor light conditions, a bird (probably the same) was seen again once and heard twice more (PDR & MT).

Further observations and sound-recordings (www.xeno-canto.org/109284) were made at site F, at *c*.100 m: at *c*.06.45 h on 20 March 2010, a woodcock was seen in flight and heard twice roding low over the canopy (MT & WP). The bird was seen in better light conditions and flew just overhead at a distance of >30 m. Typical *Scolopax* shape and large size were noted and WP also noticed yellowish, mainly unstreaked underparts. At 06.02 h the following morning, what was presumably the same roding bird was seen and heard again twice at the same location (MT & PDR). The observations were made in a coconut plantation at the edge of a patch of disturbed, fragmented primary forest, with evidence of ongoing small-scale logging. The undergrowth included a marshy gully with bare ground bisected by a low-flowing stream. It was adjacent to a wet grazed pasture and surrounded by steep hills covered by degraded forest interspersed by scattered clove and nutmeg plantations.

Our observations are the first documented records of Moluccan Woodcock since two females were collected in August–September 1982 at 'Galala', said to be on Obi (http://collections.si.edu). The latter locality is considered untraced by BirdLife International (2011b) and indeed we failed to find a locality of this name on Obi, although a remote village called Galala exists on the island of Bisa (Fig. 1). The species is known from only six other specimens, of which three were also collected on Obi (two in the 19th century and one in 1953, the latter at Wayaloar on the south coast), one on Bacan (in 1902) and two of unknown origin (Hartert 1903b, BirdLife International 2011b). During their field work on Obi in 1989 and on Obi and Bacan in 1992, respectively, Linsley (1995) and Lambert (1994) did not observe the species, but the latter obtained a convincing report from a guide at Kelo, Obi, who 'occasionally flushed this bird from ridgetops above ca. 500 m'.

Our sound-recordings permit the vocalisation of *S. rochussenii* to be described. In display, it gives a loud and distinctive call, comprising a hard, metallic, rattled or staccato phrase, with 8–11 motifs, each motif given at intervals of 0.04–0.05 seconds (Fig. 2). This rattle phrase can be transcribed *ti'ti'ti'ti'ti'ti'ti'ti'ti*. Each motif has a similar structure, comprising a distinctive pulse (*c*.4 kHz rising to *c*.5–5.5 kHz) connecting with a concurrent, higher piched and slightly variable curled syllable (*c*.6–6.8 kHz rising to 6.5–7.3 kHz and falling to 5.3–6 kHz). The rattle phrase is given at intervals of 1.8–3.3 seconds. Rattling calls of Moluccan Woodcock are strikingly similar in structure and frequency to those of *S. bukidnonensis*, but the latter have only five motifs and the pulse begins at a lower pitch (*c*.3 kHz) (Kennedy *et al*. 2001, www.xeno-canto.org/species/Scolopax-bukidnonensis). Rattles delivered by *S. bukidnonensis* are frequently interspersed by lower pitched, growling or grunting phrases, which were not heard from *S. rochussenii*, although this might just reflect the small sample of recordings. The calls of *S. rochussenii* are very different from those of New Guinea Woodcock *S. rosenbergii* (Kennedy *et al*. 2001; G. Wagner, www.xeno-canto.org/23274) and from those attributed to Javan Woodcock *S. saturata* (G. Wagner, www.xeno-canto.org/42307; F. Ducry & D. Marques, www.xeno-canto.org/56931), but we have been unable to locate sound-recordings of Sulawesi Woodcock *S. celebensis*, which are undescribed, the latter being closest to *S. bukidnonensis* by morphology. Our results suggest a close evolutionary relationship between *S. bukidnonensis* and *S. rochussenii*.

Based on the very scant information available, Moluccan Woodcock was previously assumed to be a bird of hill and montane forest (Hartert 1903b, White & Bruce 1986, Coates & Bishop 1997, Vetter 2009). However, the only traceable locality (Wayaloar, southern

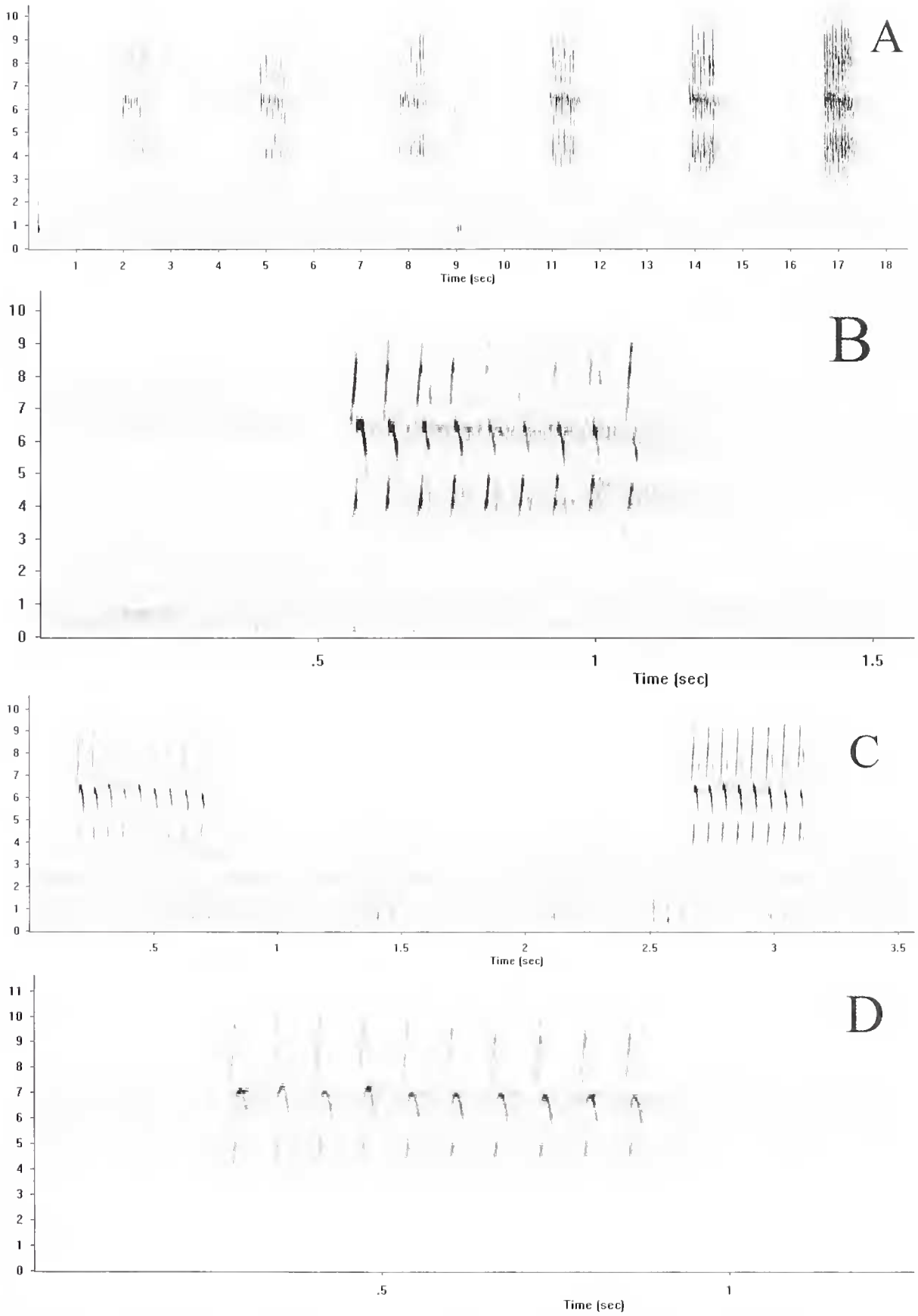


Figure 2. Sonograms of the roding display call of Moluccan Woodcock *Scolopax rochussenii* from (A–C) east of Soligi, Obi, 18 March 2010 and (D) near Jikotamo, Obi, 21 March 2010 (M. Thibault). X-axis = time (one second per tick, Fig. 2A; 0.5 seconds per tick, Figs. 2B–D), y-axis = frequency (1 kHz per tick).

Obi, August 1953) is on the coast, raising 'the possibility that its optimal (or seasonally optimal) habitat is to be found in lower-lying regions of islands where the largest, dampest substrates may perhaps occur' (BirdLife International 2011b). Our records were obtained at two of three localities visited below 500 m that we surveyed at suitable times, i.e. dusk and dawn. These records confirm that the species holds territory (and presumably breeds) in lowland forest, hence supporting the latter hypothesis and that it may not be uncommon in suitable habitat. Woodcocks were not recorded at the two localities we surveyed at 600–1,200 m despite dedicated searching. Thus, we provide evidence that the species is not only, if at all, associated with montane forest. Our records also suggest that, to some extent, Moluccan Woodcock tolerates habitat degradation and fragmentation, and that wet habitats in or close to forest (i.e. marshes or wet gullies around low-flowing streams) are perhaps important for the species. However, much remains to be learned concerning population size and ecological requirements. In the near future, direct habitat destruction resulting from mining, logging, plantations and agriculture are likely to be extended in lowland and montane areas on Obi and Bacan. Therefore, its status as Endangered (BirdLife International 2011b) should be maintained, at least until further data are collected.

METALLIC PIGEON *Columba vitiensis halmaheira*

On 13–15 March 2010, a calling bird was seen and two more heard at site E at *c*.1,200 m in primary forest (MT, PDR & WP). On 14 March 2010 a bird was heard at the same site at 1,100 m (MT). Photographs and sound-recordings were made. No conclusive record was obtained at lower elevation. The species is widespread in Wallacea. White & Bruce (1986) and Coates & Bishop (1997) reported its presence on Gomumu, a small satellite island 9 km south of Obi, but they did not mention it from mainland Obi. These statements contradict Hartert (1903a), who mentioned that a specimen of '*Columba albigularis*' was sent by Lucas from 'Obi Major'. Furthermore, during a visit to Tring museum in 2011, MT & PDR were able to check five (three females and two males) *C. v. halmaheira* collected by Waterstradt on Obi in January 1903. These specimens might have been collected too late for inclusion in Hartert's review of the birds of Obi. In any case our investigations clarify the status of this taxon on mainland Obi and also describe its altitudinal range on this island.

SLENDER-BILLED CUCKOO-DOVE *Macropygia amboinensis albiceps*

Common in forest and forest edge from sea level to 1,210 m, with photographs made by MT at *c*.1,200 m. Our records considerably extend the altitudinal range on Obi as previous published records are below 500 m (Coates & Bishop 1997) and are in accordance with its altitudinal range from elsewhere in Wallacea (Coates & Bishop 1997).

SCARLET-BREASTED FRUIT DOVE *Ptilinopus bernsteinii micrus*

Regularly seen and commonly heard at 150–1,210 m in primary and logged forest. A nest attended by at least one adult, containing a single egg, was found on 13 March 2010 at 1,210 m in primary forest (WP, PDR & MT). The nest was a flimsy construction on a fern *c*.80 cm above the ground, comprising a small moss cup on a larger assemblage of small branches. *P. bernsteini* is endemic to North Maluku, with the nominate subspecies found from Halmahera to Bacan and *micrus* restricted to Obi (Baptista *et al.* 1997). Previously known at 180–600 m on Obi (Lambert 1994). Our records include the first description of a nest on Obi, whose characteristics and situation are similar to those described from Halmahera (Lansley & Farnes 2006).

SUPERB FRUIT DOVE *Ptilinopus superbus*
Common at 150–1,000 m, with further records of two separate birds heard at 1,200 m in primary montane forest. Our records significantly extend the altitudinal range for the species on Obi, where it was previously unrecorded above 700 m (Lambert 1994, Coates & Bishop 1997).

CARUNCULATED FRUIT DOVE *Ptilinopus granulifrons*
Only recorded once, at site A on 19 March 2010, when at least eight were observed through a telescope in the upper canopy of a large fruiting *Ficus*, in logged forest at *c*.220 m (PDR & MT). This single record and the species' apparent absence at higher elevations appear to corroborate that this is an uncommon species closely associated with lowland forest (Coates & Bishop 1997, BirdLife International 2011a).

SPECTACLED IMPERIAL PIGEON *Ducula perspicillata*
Commonly heard and occasionally seen from sea level to 1,200 m in forest edge, logged forest and primary forest. Our records significantly extend the species' altitudinal range on Obi (Lambert 1994). They also significantly extend the altitudinal range for the species in the northern Maluku where it was previously recorded to 900 m on Halmahera (Poulsen & Lambert 2000).

CINNAMON-BELLIED IMPERIAL PIGEON *Ducula basilica obiensis*
This northern Maluku endemic was fairly commonly seen and heard in forest edge, logged forest and primary forest at 150–1,210 m (WP, PDR, MT) and it was photographed at *c*.1,100 m (MT). Our records significantly extend the species' altitudinal range on Obi, where it was previously unrecorded above 730 m (Lambert 1994) and match the upper limit of 1,230 m for the nominate subspecies on Halmahera (Poulsen & Lambert 2000).

Sound-recordings of *D. b. obiensis* were obtained by MT (Fig. 3), enabling comparisons with vocalisations of *D. b. basilica* from Halmahera (www.xeno-canto.org/species/Ducula-basilica). Both forms give similar vocalisations: songs usually comprise a series of 1–2 (less frequently three) very deep, throaty growls, *roow roooorw-ooow*, at 0.4–0.5 kHz. When the first call is a short note (lasting 0.2 seconds), the second call is often longer (2.0–2.5 seconds), whereas when a first, longer call (0.8–1.3 seconds) is given, there is no second call or it is frequently shorter (i.e. 1.3–1.7 seconds). Longer calls typically rise very slightly and end abruptly.

It was recently proposed to split *obiensis* (which is confined to Obi) from *basilica* (on Morotai to Bacan; www.birdlife.org/globally-threatened-bird-forums/2012/) following application of the Tobias *et al.* (2010) criteria. Although justification for this taxonomic

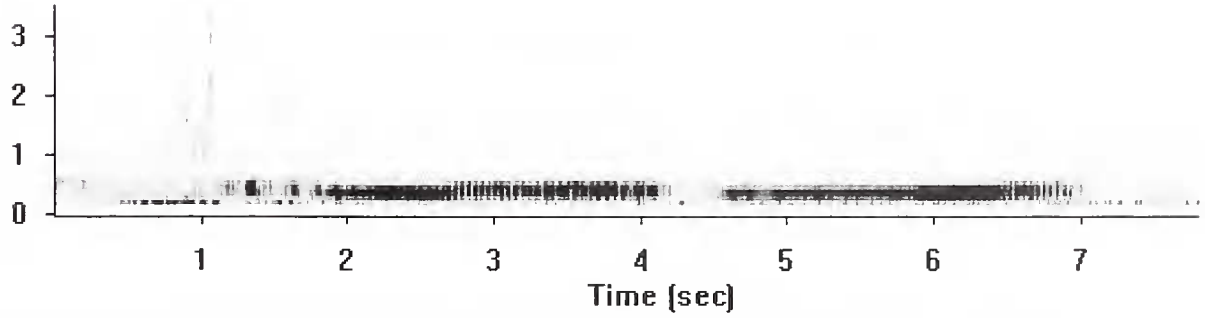


Figure 3. Sonogram of Cinnamon-bellied Imperial Pigeon *Ducula basilica obiensis*, Obi, 12 March 2010 (M. Thibault). X-axis = time (one second per tick), y-axis = frequency (1 kHz per tick).

Figure 4. Cinnamon-bellied Imperial Pigeon *Ducula basilica*, with (A) *basilica* (a pair), Halmahera, 3 October 2011 (© F. Steinhauser), (B) *obiensis* (a pair), Obi, 15 March 2010 (M. Thibault).

treatment is unpublished, Hartert (1903a) already emphasised plumage differences between these two taxa, stating that *D. b. obiensis* is 'very different' from *D. b. basilica*, 'the entire head, throat, foreneck, and breast being much deeper vinous, with a greyish wash; the hindneck darker grey, separated from the vinous head by a rusty patch; abdomen and under tail-coverts deep cinnamon, instead of pale cinnamon'. According to Hartert (1903a), the collector W. Doherty also noted that *obiensis* has 'iris dark crimson, eyelids vermilion; feet vermilion; bill nearly black', whereas *basilica* (from Ternate) has 'iris crimson; feet pale carmine; bill black'. Although the subtle differences in bare-parts coloration might be difficult to appreciate in the field, the plumage differences between these taxa are obvious (Fig. 4). However, given the lack of obvious vocal difference between *D. b. basilica* and *D. b. obiensis*, we suggest that splitting these two taxa might require more investigation.

VIOLET-NECKED LORY *Eos squamata obiensis*

Recorded regularly from sea level to 700 m in a wide range of habitats including coconut plantations, primary and logged forest. Less frequently encountered at higher elevations with two sightings at 850 m and single observations at 1,110 m and 1,210 m (PDR, WP, MT). Most frequently observed in pairs or trios, although a large flock of *c.*25 was seen on 11 March at 1,110 m. Previous published records on Obi range up to 730 m. The elevational range on Obi is therefore significantly wider than previously known, similar to Halmahera where *E. s. riciniata* has been found to 1,230 m (Poulsen & Lambert 2000).

No sign of trapping during our visit. *E. squamata* is widespread on Obi including in primary forest, logged forest and non-forest habitats. As there was no obvious indication of a status change compared to Lambert (1993), this species may require quantitative surveys to detect any, perhaps slight, change in density.

Morphologically, *obiensis* closely approaches the nominate race (as mentioned by Collar 1997), which is restricted to the West Papuan islands, but is strikingly different from *riciniata* on Morotai to Bacan, notably in having the entire head and neck uniform red and greater wing-coverts and scapulars black (pers. obs.). Based on these observations, we suggest that the taxonomic position of the taxa currently included in *E. squamata* should be reassessed and require a detailed study of morphology, acoustics and DNA.

CHATTERING LORY *Lorius garrulus flavopalliatus*

Singles and groups of 2–4 recorded almost daily in logged and primary forest, with max. flock of at least ten foraging birds in selectively logged forest at 440 m on 19 March (WP, OP, PDR, MT). Regularly recorded to 1,000 m and seen twice at 1,100 m, extending the altitudinal range of 370 m given previously for Obi (Coates & Bishop 1997). Several captive *L. g. flavopalliatus* seen in villages and at a logging settlement, apparently being kept as pets. As noted by Linsley (1995), this species is the commonest captive parrot on Obi, indicating that it still faces heavy trapping pressure. However, compared to Lambert (1993), our observations do not suggest a significant decline. It may require quantitative surveys to detect any, perhaps slight, change in density.

RED-FLANKED LORIKEET *Charmosyna placentis intensior*

Very common from sea level to 400 m and less common, albeit regular, to 1,210 m. These records provide the first data concerning the altitudinal range of *C. placentis* on Obi and extend the altitudinal range known elsewhere in northern Maluku, where it had previously been recorded up to max. 1,010 m on Halmahera (Poulsen & Lambert 2000). *C. placentis* is occasionally recorded to 1,600 m in New Guinea (Coates & Peckover 2001).

RED-CHEEKED PARROT *Geoffroyus geoffroyi obiensis*
Total of 21 records of 1–6 birds seen or heard at 200–1,000 m, with 18 records below 600 m, mostly in selectively logged forest. Few were encountered in primary forest, possibly because of lower density or near-absence at higher altitudes. Our records significantly extend the altitudinal range of this subspecies endemic to Obi and Bisa, where it had been reported to 800 m (Coates & Bishop 1997). *G. geoffroyi* comprises 16 widely recognised subspecies ranging from Wallacea to New Guinea and north-east Australia (Collar 1997, Gill & Donsker 2012), of which several differ markedly in plumage, size and vocalisations (Collar 1997). *G. g. obiensis* is closer to *G. g. cyanicollis* from northern Maluku, sharing with it a long blue collar, although on *obiensis* this is larger and it has a brownish back which is lacking on *cyanicollis* (Collar 1997). The piercing, high-pitched nasal calls of *obiensis* have been described by Lambert (1994) and Linsley (1995), who report that they are distinctive compared to *cyanicollis* from Bacan, *floresianus* from Sumba and *rhodops* from Buru. These observations suggest that a detailed taxonomic study of *G. geoffroyi* is required, including morphological, acoustic and DNA comparisons.

ECLECTUS PARROT *Eclectus roratus vosmaeri*
Wild birds recorded just twice, both in the lowlands, with three in coastal coconut plantations near Soligi on 8 March 2010 (all observers) and a female in degraded forest with cloves and coconut plantations at site F on 20 March (WP, MT). A captive bird apparently kept as a pet near Soligi. Reportedly very common, at least in the north of the island, in the 1950s (Lambert 1994), but then declined dramatically due to trapping, so that Linsley (1995) and Lambert (1994) only obtained one sighting each. Our observations indicate that *E. rotatus* remains rare on Obi, where it is primarily confined to lowland and coastal areas. Despite being protected by Indonesian law, it probably is extensively traded in northern Maluku (ProFauna Indonesia 2008), although perhaps less so than both lories (Lambert 1993). There is no indication that the species' conservation status on Obi has improved or even changed since the 1990s.

MOLUCCAN CUCKOO *Cacomantis aeruginosus* ssp.
Three calling *Cacomantis* were recorded: a vocalising bird on 11–12 March 2010 at site D at 750 m in primary forest (sound-recorded, MT), another calling bird photographed (Fig. 5) and sound-recorded (Fig. 6A–E) at site E on 13 March 2010 and heard again on 16 March at

Figure 5. Moluccan Cuckoo *Cacomantis aeruginosus* ssp. (same individual), Obi, 13 March 2010 (M. Thibault).

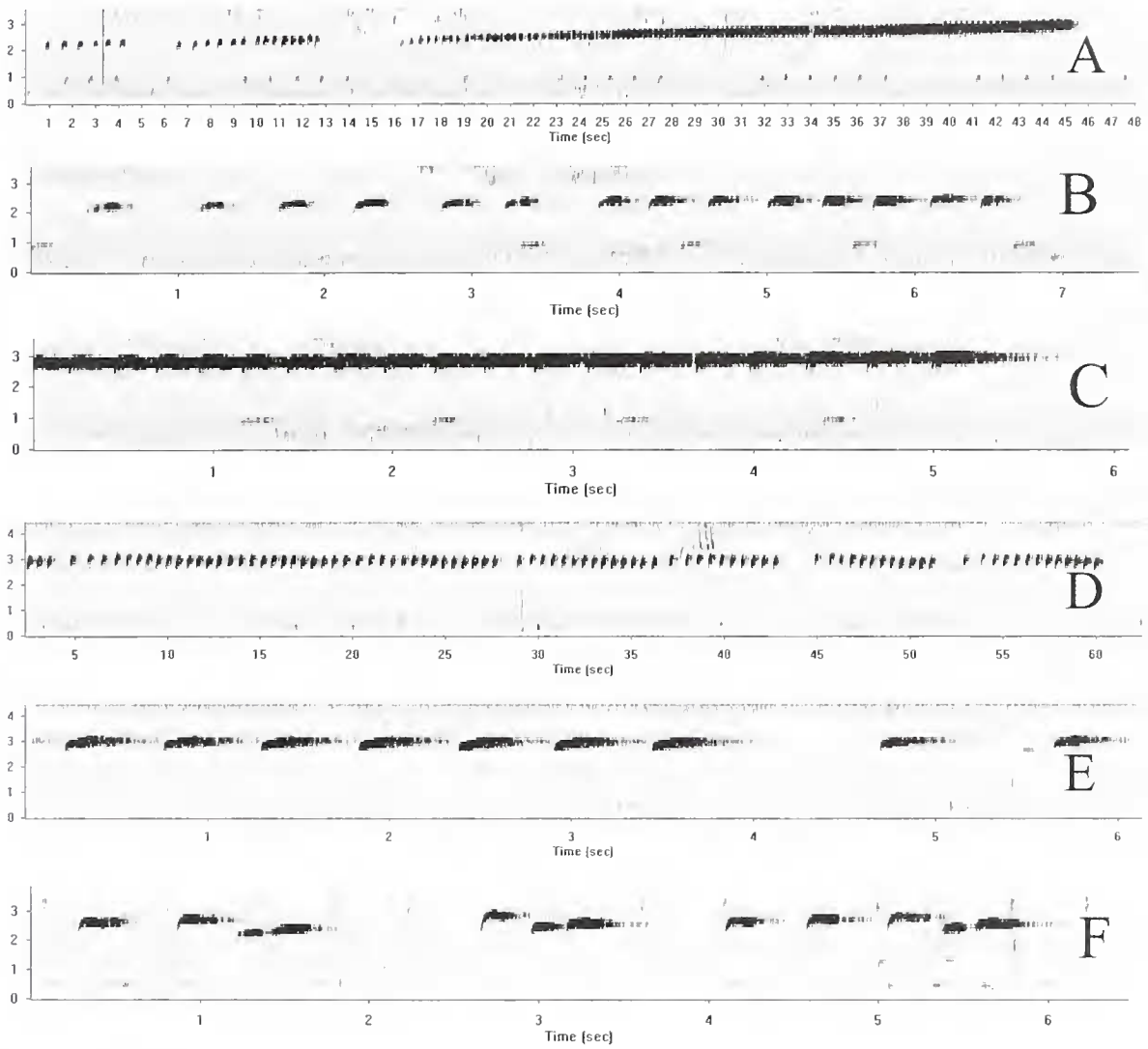


Figure 6. Sonograms of Moluccan Cuckoo *Cacomantis aeruginosus* ssp. by M. Thibault, with (A) long, rising and accelerating song, Obi, 13 March 2010, (B–C) details of A, (D) long level song, Obi, 13 March 2010 (same individual as in Figs. 6A–C), (E) detail of D, (F) three-note song, Obi, 21 March 2010. X-axis = time (one second per tick, y-axis = frequency (1 kHz per tick).

870 m in logged forest by MT, with a third briefly seen (WP, PDR, MT) and sound-recorded (Fig. 6F) on 20–21 March at *c*.100 m at site F (MT). In addition, a juvenile *Cacomantis* fed by a pair of *Phylloscopus poliocephalus waterstradti* was observed on 13 March 2010 at site E at 1,200 m in primary montane forest (WP, PDR, MT). The latter observation provides the first documented record of a *Cacomantis* breeding on Obi.

Taxonomy of resident *Cacomantis* cuckoos in Maluku is highly confused (Rheindt & Hutchinson 2007, Tebb *et al.* 2008, Rheindt 2010, Erritzøe *et al.* 2012) and the situation is exacerbated by the seasonal occurrence of migrant Brush Cuckoo *C. v. variolosus* from Australia. *C. variolosus* and *C. sepulcralis* are sometimes merged into one species (Payne 1997, 2005), but several works maintain the separation of *C. v. infaustus* and Rusty-breasted Cuckoo *C. sepulcralis aeruginosus* in southern Maluku (White & Bruce 1986, Coates & Bishop 1997, Erritzøe *et al.* 2012). Hartert (1925) separated northern Maluku birds as *oblitus*, which is reported to be paler below with longer wings than *infaustus*, which he considered to be restricted to southern Maluku. However, most recent works consider *oblitus* a synonym of *infaustus* (White & Bruce 1986, Coates & Bishop 1997, Payne 1997, Erritzøe *et al.* 2012).

Figure 7. From left to right: *Cacomantis sepulcraris virescens* (three from Manado, Sulawesi), *C. aeruginosus aeruginosus* (one from Buru and one from Ambon), *C. variolosus* (three from Bacan and two from Ternate) (M. Thibault / © The Natural History Museum, Tring).

Heinrichi is a poorly known taxon described from Bacan and Halmahera by Streseman (1931) who distinguished it from sympatric *C. v. oblitus* (= *infaustus*) on the basis of smaller size, with proportionately shorter wings and longer tail, more rufous underparts, darker olive-brown upperparts and yellow legs (instead of yellow-green or brownish). Other features not mentioned by Streseman (1931) include rufous notches in the outer edges of the rectrices (Coates & Bishop 1997, Erritzøe *et al.* 2012), dark grey throat (Payne 1997, Erritzøe *et al.* 2012) and eye-ring either undescribed (Coates & Bishop 1997) or greyish (Payne 1997). *Heinrichi* is variously treated as a synonym of resident *C. v. infaustus* (Payne 2005, Erritzøe *et al.* 2012) or recognised as an endemic species sympatric with *C. v. infaustus* and migrant *C. v. variolosus* (Heinrich 1956, Payne 1997, White & Bruce 1986, Coates & Bishop 1997). Alternatively, it was recently suggested, based mainly on vocalisations, that *aeruginosus* and *heinrichi* may belong to the same species (Tebb *et al.* 2008; J. A. Eaton pers. comm., F. Rheindt pers. comm.), a view supported by Gill & Donsker (2012), who afforded *aeruginosus* species status, including *C. a. aeruginosus* from southern Maluku and *C. a. heinrichi* on Halmahera and Bacan.

A distinct race, *C. v. obiensis*, was described from Obi by Jany (1955) on the basis of darker plumage and longer tail compared to resident *C. variolosus* from northern Maluku, but he did not compare it with *C. aeruginosus aeruginosus*. *C. v. obiensis* is generally treated as a synonym of *C. v. infaustus* (White & Bruce 1986, Payne 1997, Erritzøe *et al.* 2012). White & Bruce (1986) and Coates & Bishop (1997) mentioned the presence of two taxa on Obi, namely migrant *C. v. variolosus* and resident *C. v. infaustus*, but a calling bird observed and sound-recorded by F. R. Lambert possibly refers to *C. heinrichi* (www.xeno-canto.org/67791).

The bird photographed on 13 March 2010 (Fig. 5) was rather long-tailed with dark upperparts. It had a distinctive pattern on the underside of some rectrices, with whitish to

pale rufous bars extending the full width of the inner web. It also had rich rufous underparts with greyish feathers restricted to the upper throat and chin, merging with rufous feathers, yellow eye-ring, brownish tone to the base of the lower mandible and bright yellow legs. These features most recall *C. a. aeruginosus* (Fig. 7; http://orientalbirdimages.org/search.php?p=2&Bird_ID=448&Bird_Family_ID=&pagesize=1) and *C. a. heinrichi*, based on the description of Streseman (1931). The bird photographed on Obi also strongly recalls a bird recently photographed on Halmahera and tentatively identified as Moluccan Cuckoo (Tebb *et al.* 2008). It noticeably differs from *C. s. virescens* from Sulawesi and the Sula Islands, the latter having greyish feathers extending lower on the breast and shorter whitish bars restricted to the inner web of the rectrices (Fig. 7). In addition, adults from northern Maluku referred to *C. variolosus* in Tring museum all possess paler rufous underparts with a predominantly greyish throat and breast (Fig. 7).

Most taxa in the *C. sepulcralis / variolosus* complex give two or more vocalisation types: (1) trisyllabic call notes repeated at rising frequencies and (2) a series of single calls usually repeated at level frequency (Coates & Bishop 1997, Rheindt 2010; pers. obs.), albeit with pronounced inter-racial differences (Coates & Bishop 1997, Payne 2005, Rheindt & Hutchinson 2007). In addition, distinctive variant vocalisations unambiguously given by *C. a. aeruginosus* on Seram, Buru and Ambon (Coates & Bishop 1997, Rheindt & Hutchinson 2007) and presumably by *C. a. heinrichi* on Halmahera (Tebb *et al.* 2008) include long series' of calls repeated very rapidly and delivered on either a level or rising frequency. These variant vocalisations are unknown in other forms of the *sepulcralis / variolosus* complex (Rheindt & Hutchinson 2007, Tebb *et al.* 2008, Rheindt 2010) and are also lacking in the many recordings of *C. variolosus* from the Lesser Sundas, New Guinea and Australia that we examined in online sound collections (i.e. xeno-canto.org; avocet.zoology.msu.edu/).

Variant calls described above and similar to calls previously recorded on Obi by F. R. Lambert were given by each of the three birds we recorded. These calls comprised rather flattened, hook-shaped individual call elements, which are frequently given by various races of *sepulcralis* and *C. a. aeruginosus*, but much less so by *C. variolosus*. Most interestingly, we failed to record the typical staple-shaped notes on Obi given by *C. variolosus* (see Tebb *et al.* 2008; F. R. Lambert, www.xeno-canto.org/38144).

Based on plumage and vocalisations, we conclude that our records refer to *C. aeruginosus* giving further support to the view that *heinrichi* and *aeruginosus* represent a single species (Tebb *et al.* 2008; F. Rheindt pers. comm., J. A. Eaton pers. comm.). Furthermore, given that we failed to record typical *variolosus* calls, we question the occurrence of a resident *variolosus* population (i.e. *C. v. infaustus*) on Obi and suggest that careful examination of *Cacomantis* specimens from Obi identified as *variolosus* might reveal, if they do not represent the *aeruginosus / heinrichii* group, that they are migrants of nominate *variolosus* from Australia. A thorough bio-acoustic, morphological and genetic study is required to clarify the taxonomy of *Cacomantis* in Australasia and Wallacea. Regarding the resident population on Obi, further study should clarify whether it belongs to *C. a. aeruginosus* or *C. a. heinrichi*, or to the endemic *obiensis* described by Jany (2005), which in our view should not be synonymised with *C. v. infaustus* until a thorough assessment is conducted.

MOLUCCAN SCOPS OWL *Otus magicus obira*

Seen three times and frequently heard at *c.*100–1,210 m, in forest edge, logged forest and primary forest. These are the first data on habitats, elevational range, status and vocalisations of this bird on Obi (White & Bruce 1986, Coates & Bishop 1997). Sound-recordings were obtained on 9 March 2010 (Fig. 8). The call is a short, harsh, rasping *kwok*, repeated at intervals of 5–7 seconds. Calls last 0.33–0.5 seconds, at 0.6–1.2 khz. When excited

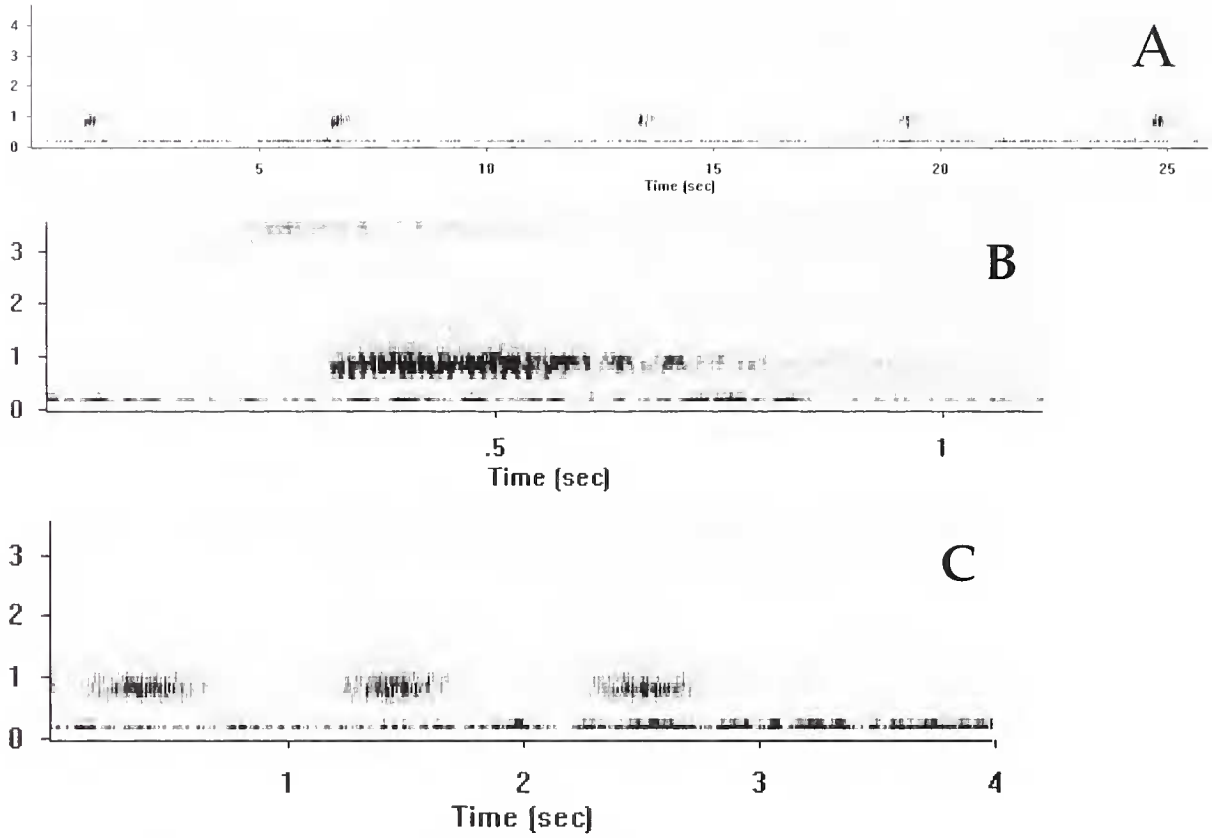


Figure 8. Sonograms of Moluccan Scops Owl *Otus magicus obira*, Obi, 8 March 2010 (M. Thibault): A: typical call. B: detail of A. C: excited *kwook* calls. X-axis = time (five seconds per tick, Fig. 8A; 0.5 seconds per tick, Fig. 8B; one second per tick, Fig. 8C), y-axis = frequency (1 kHz per tick).

by playback, one bird gave a series of *kwook* notes slightly longer and deeper than the usual call and repeated at shorter intervals. These vocalisations were found to be more restricted in frequency range, but otherwise similar to recordings of *O. m. magicus* from Buru (F. R. Lambert, www.xeno-canto.org/68940), *O. m. leucospilus* from Halmahera (D. Farrow, www.xeno-canto.org/19771) and *O. m. albiventris* from Flores (F. R. Lambert, www.xeno-canto.org/121829).

UNIFORM SWIFTLET *Aerodramus vanikorensis*

Identified on several occasions among mixed-species groups of *Aerodramus* and *Collocalia* spp. at 200–300 m on 19 March 2010 (MT & PDR). The birds were forced to fly low above ground by heavy rain, enabling reasonably good views against a forested background. Identification was based on the combination of larger size in direct comparison to Seram Swiftlet *A. ceramensis* and Glossy Swiftlet *C. esculenta*, and overall uniform brown plumage. At least 40 were present. Prior to our observations, only Lambert (1994) had reported this species on Obi.

SERAM SWIFTLET *Aerodramus ceramensis*

Also on 19 March 2010, MT & PDR observed at least 12 swiftlets intermediate in size between *A. vanikorensis* and *C. esculenta*, with glossy black upperparts, bold, clear-cut whitish rump band and paler underparts with dirty white belly and undertail-coverts. Following the split from Moluccan Swiftlet *Aerodramus infuscata* (Rheindt & Hutchinson 2007), we identified

these as Seram Swiftlets, which taxon had been tentatively identified on Obi by Lambert (1994) and our record suggests that it may be a regular visitor or resident.

WHITE-THROATED NEEDLETAIL *Hirundapus caudacutus*

On 18 March 2010, several small flocks totalling *c.*120 of this Palearctic migrant were recorded at site B at 400 m (OP, WP, PDR, MT). Most were low over the forest canopy, offering prolonged views in good early morning light. Key identification features including the extensive white throat were observed, eliminating Purple Needletail *H. celebensis* of Sulawesi and the Philippines and Silver-backed Needletail *H. cochinchinensis*, which breeds in mainland Asia and winters south-east to Java (Chantler 1999). All were flying west and might have been migrants. On 19 March 2010, small flocks totalling *c.*65 were seen at scattered locations between 320 m and 420 m (PDR, MT). Our records are the first for Obi and northern Maluku. Previous records from Sangihe, Sulawesi, Taliabu, Buru, Banda, Lombok, Timor (Coates & Bishop 1997), Atauro (Trainor & Leitao 2007), Tanimbar (J. A. Eaton pers. comm.) and Peleng (Rheindt *et al.* 2010) suggest that migrants can occur anywhere in Wallacea.

BLYTH'S HORNBILL *Rhyticeros plicatus*

Singles and pairs regularly recorded in logged forest and forest edge from sea level to 400 m, with a single on a forest ridge at 800 m (all observers). No previous information concerning elevational range on Obi (Coates & Bishop 1997, White & Bruce 1986).

RED-BELLIED PITTA *Erythropitta erythrogaster obiensis*

Seen twice and fairly commonly heard from *c.*100 m to 1,050 m. Most frequent in selectively logged forest and also found in second growth and scrub. Several sound-recordings of a singing bird obtained on 19 March (Fig. 9). The song comprised two slightly rising notes, the first note rising more markedly than the second, while the latter is flatter at the end. It was similar, but not identical, to the vocalisation on Halmahera (R. Drijvers *in*

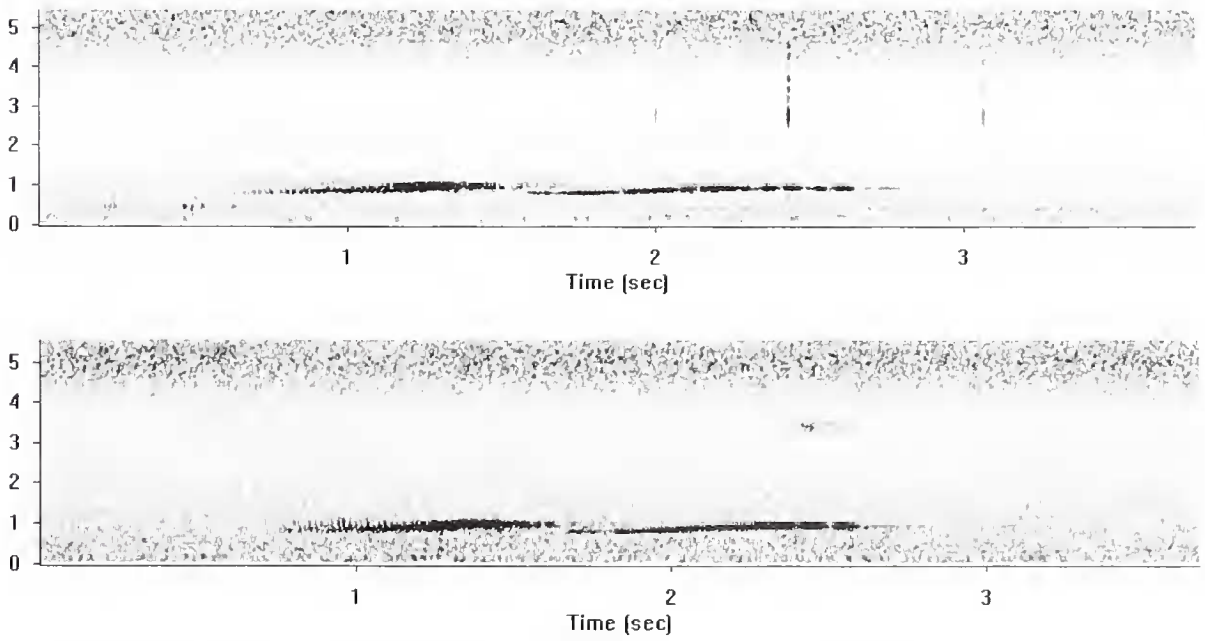


Figure 9. Sonograms of Red-bellied Pitta *Erythropitta erythrogaster rufiventris*, Obi, 19 March 2010 (M. Thibault). X-axis = time (one second per tick), y-axis = frequency (1 kHz per tick).

Sharringa 2005, www.xeno-canto.org/89488). However, given that *E. erythrogaster* presents considerable individual variation (Rheindt *et al.* 2010; pers. obs.), we are unable to comment further on the distinctiveness of the Obi vocalisation. While our records match previous statements that the species is common on Obi (Lambert 1994), they significantly extend the upper altitudinal range on the island. *E. e. obiensis* was described by Hachisuka (1935), who distinguished it from *rufiventris*, which occurs in most of northern Maluku, by an allegedly paler blue breast, despite earlier statement that specimens from Obi did not differ from *rufiventris* (Hartert 1903a). However most recent works treat *obiensis* as a synonym of *rufiventris* (White & Bruce 1986, Lambert & Woodcock 1996, Dickinson & Dekker 2000, Erritzoe 2003). A careful examination of specimens and thorough acoustic comparison are required to ascertain the taxonomic position of the Obi population.

DUSKY MYZOMELA *Myzomela obscura rubrotincta*

Common at 200–1,210 m with a single near sea level. Our records extend the altitudinal range on Obi, where it was previously unknown above 800 m (Coates & Bishop 1997). We had several opportunities to closely observe and photograph *rubrotincta*, which is restricted to Obi and Bisa. It has a bright reddish mantle, wings and tail, and a rosy red wash to the head-sides and most of the underparts, albeit brighter on the breast-sides and flanks (Fig. 10). MT found the appearance of *rubrotincta* to be strikingly different from the nominate race that he has observed in northern Australia, which is an overall greyish-brown bird. We also found *rubrotincta* to differ markedly from *simplex* that we saw on Halmahera immediately following our visit to Obi, which is a dark greyish bird, with reddish restricted to the outer edge of the remiges and rectrices, underparts pale greyish brown, with some pinkish-brown fringes on the breast feathers scarcely visible in the field (see http://orientalbirdimages.org/search.php?Bird_ID=1342).

Figure 10. Dusky Myzomela *Myzomela obscura rubrotincta*, Obi, 13 March 2010 (M. Thibault).

M. obscura comprises eight widely recognised races from northern Maluku to New Guinea and northern Australia (Higgins *et al.* 2008, Gill & Donsker 2012). Races are considered to comprise two groups, with *obscura* (northern Australia), *harterti* (islands of Torres Strait and north-east Australia), *fumata* (New Guinea), *rubrobrunnea* (Biak) and *aruensis* (Aru) comprising the 'nominate group', and *mortyana* (Morotai), *simplex* and *rubrotincta* the '*simplex* group' (Higgins *et al.* 2008). However, in the nominate group, which mainly has overall dark grey-brown plumage, *rubrobrunnea* is remarkable as it has a brownish-red wash (see www.birdforum.net/opus/images/8/82/4370Dusky_Myzomela.jpg) and is also reported to have a reddish throat stripe (Higgins *et al.* 2008). These differences induced Hartert (1903a) to consider it intermediate between *simplex* and *rubrotincta*, and Mayr *et al.* (1939) to suggest that *rubrobrunnea* might constitute a species-level taxon. Based on important plumage differences, we consider that *rubrotincta* should be treated as a species and we suggest that molecular, morphological and perhaps acoustic analyses of the *M. obscura* complex should be conducted as they might reveal that non-clinal variation among island forms elsewhere in the northern Moluccas and on Biak include one or more additional species-level taxa.

SULAWESI MYZOMELA *Myzomela chloroptera* (undescribed subspecies?)
On 13 March, an adult male, an immature male and at least one female / juvenile were observed and photographed at 950 m at site E (MT). On 15 March, two females / juveniles in the same area (OP, MT). On both occasions, they fed in low trees and dense second growth bordering a logging track. These are the first confirmed records of *M. chloroptera* for Obi. It is of note that a 'mostly red' *Myzomela* sp. seen in 1992 in the lowlands of Obi could refer to this species, but the view was too brief for a description (F. R. Lambert pers. comm.).

M. chloroptera currently comprises four widely recognised subspecies: the nominate from north and central Sulawesi, *juga* from south Sulawesi, *eva* from Salayar and Tanahjampea, and *batjanensis* from Bacan (Coates & Bishop 1997, Higgins *et al.* 2008). Populations recently discovered on Taliabu, Sula Islands (Davidson *et al.* 1991, Rheindt 2010) and Peleng, Banggai Islands (Rheindt *et al.* 2010) closely resemble the nominate, although future research may reveal that they comprise one or two new subspecies.

Figure 11. Male Sulawesi Myzomela *Myzomela chloroptera* ssp. (presumably the same individual), Obi, 13 March 2010 (M. Thibault). Strongly patterned black-and-red upperparts, all-black scapulars, wing and tail feathers lacking brownish tinge and pure red on head, throat and breast clearly demarcated from pale greyish belly and whitish flanks strongly suggest it is a full adult. Underparts coloration strikingly differs from *batjanensis* and also shows subtle differences compared to typical adults of the nominate race.

Figure 12. From left to right: *Myzomela chloroptera batjanensis* (three from Bacan), *M. c. chloroptera* (two from Minahassa Peninsula, north Sulawesi), *M. c. juga* (one from south-west peninsula of Sulawesi), *M. c. eva* (two from Salayar and Tanahjampea, respectively) (M. Thibault / © The Natural History Museum, Tring).

The population we discovered on Obi fills a geographical gap between *batjanensis* and the populations on Taliabu and Peleng. One of the birds photographed (Fig. 11) was an adult male based on its strongly patterned black-and-red upperparts, pure red head, throat and breast lacking any greyish (immature) feathers and clearly demarcated pale greyish belly and whitish flanks. Preliminary comparisons can be made with other subspecies of *M. chloroptera*. Compared to *batjanensis* (geographically proximate), the adult male photographed on Obi was strikingly different, having a red (not greyish-olive) breast. The red below did not extend to the belly and appeared more restricted than on typical adults of the nominate (pers. obs.), although whether this pattern lies within individual variation of the latter cannot be fully excluded. It had a whitish abdomen, with no trace of the fawn grey-brown tinge supposedly distinctive of the nominate (Coates & Bishop 1997; Fig. 12). Compared to geographically distant *eva* and *juga*, no significant plumage difference could be detected. Compared to the (limited) photographic material available for populations on Taliabu (Rheindt 2010; F. Rheindt unpubl.) and Peleng (F. Verbelen unpubl.), red was lacking on the upper belly and flanks, suggesting that it possibly represents an undescribed taxon. Detailed morphological, acoustic and molecular analyses of the *M. chloroptera* group are required, as already suggested by Rheindt (2010) and Rheindt *et al.* (2011).

PALE CICADABIRD *Coracina ceramensis hoogerwerfi*

Recorded at 300–1,220 m in logged and primary forest and forest edge, seldom in the lowlands (three records below 700 m) and most commonly above 800 m (ten records). Endemic to Maluku, the subspecies *hoogerwerfi* is restricted to Obi. Our observations provide the first data on the elevational range of *hoogerwerfi* (Coates & Bishop 1997, White & Bruce 1986) and add new information concerning its habitat preferences (Linsley 1995).

RUFOUS-BELLIED TRILLER *Lalage aurea*
Common in logged forest and forest edge to 420 m. This monotypic species endemic to northern Maluku is a lowland specialist. Our records slightly extend the altitudinal range on Obi, where it was previously reported to 300 m (Coates & Bishop 1997).

COMMON GOLDEN WHISTLER *Pachycephala pectoralis obiensis*
Recorded at 300–1,220 m, most commonly above 700 m. *P. pectoralis* was reported from the lowlands of Obi (Linsley 1995), but there were no previous data on the upper elevational range of *P. p. obiensis* (White & Bruce 1986, Coates & Bishop 1997). The Common Golden / Mangrove Whistler *P. pectoralis / melanura* complex, with 66 named populations, is one of the most complex examples of avian geographic variation (Jønsson *et al.* 2008). The IOC currently treats Obi populations as part of Black-chinned Whistler *P. mentalis* (northern Maluku: Gill & Donsker 2012) but it seems preferable to await genetic and vocal analyses of the complex before accepting this split.

CINNAMON-BREASTED WHISTLER *Pachycephala johni*
Common in logged forest, primary forest and forest edge, and also seen in regrowth and scrub, at 300–1,200 m, with a single record near sea level. Our observations significantly extend the altitudinal range given for this Obi endemic, which was previously recorded at 220–700 m (Lambert 1994).

Most authors (White & Bruce 1986, Coates & Bishop 1997, Boles 2007) placed *johni* within *P. griseonota*, along with five additional subspecies differing significantly in their plumage and potentially vocalisations (Coates & Bishop 1997, Rheindt *et al.* 2010), despite the initial assignment of *johni* to species level by Hartert (1903a), who argued that it 'has

Figure 13. Male Cinnamon-breasted Whistler *Pachycephala johni*, Obi, 15 March 2010 (M. Thibault).

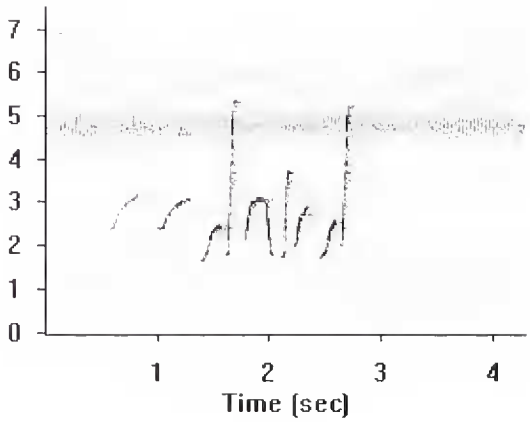
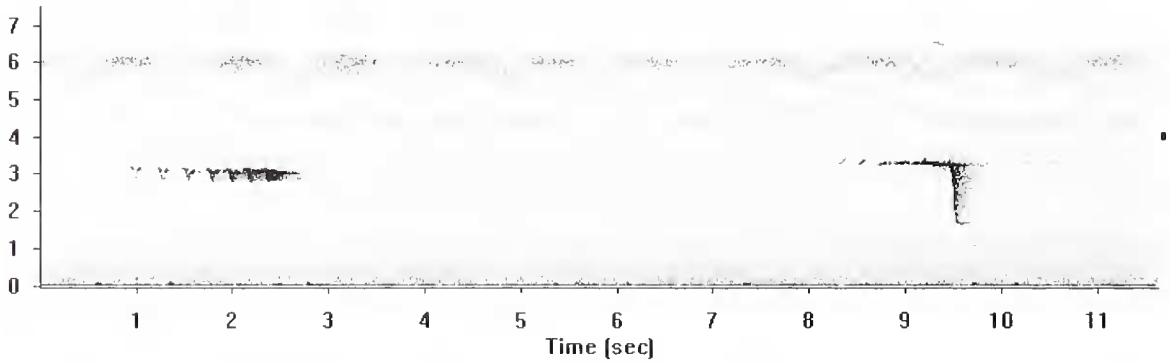
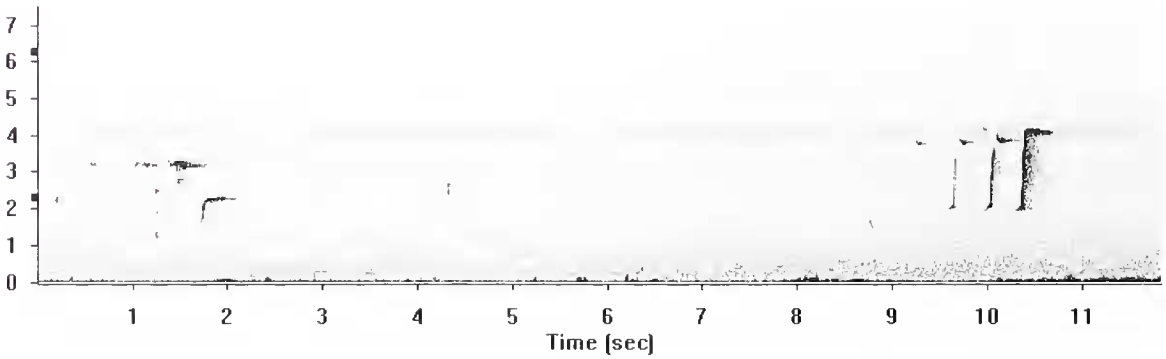
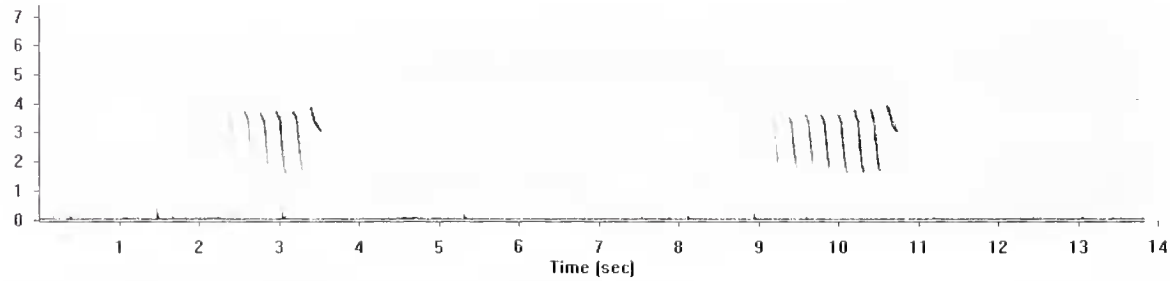
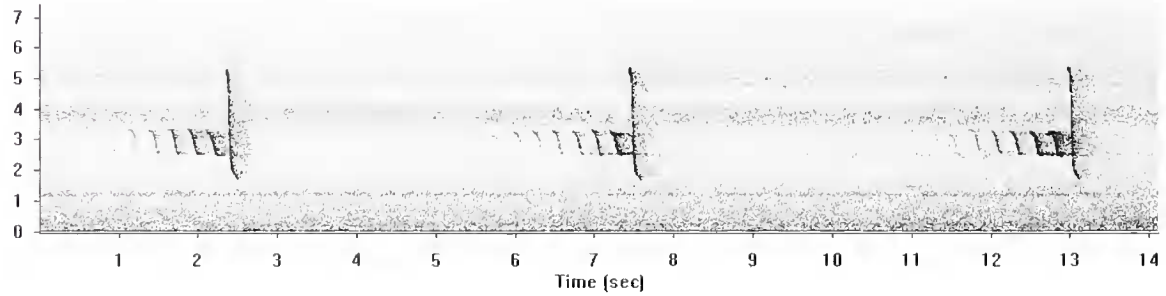


Figure 14. Sonograms of the songs of (A) Cinnamon-breasted Whistler *Pachycephala johni*, Obi highlands, 16 March 2010 (M. Thibault) and (B–E) Drab Whistler *P. griseonata*, with (B) *P. g. griseonata*, Kopiboto, Seram (R. O. Hutchinson), (C) *P. g. griseonata*, Sawai, Seram (J. A. Eaton), (D–E) *P. g. examinata*, Wamlana, Buru (J. A. Eaton). X-axis = time (one second per tick), y-axis = frequency (1 kHz per tick).









no very close ally' and that 'its bright rufous-cinnamon underside distinguishes it at once from all others [*Pachycephala*]'. We were impressed by the wholly rich rufous-cinnamon underparts in male *johni* (Fig. 13), whereas male *P. griseonata* is described as having whitish (nominate, *examinata, lineolata*), greyish (*kuehni*) or ashy grey (*cinerascens*) throat, greyish breast (*examinata, lineolata, cinerascens*), tinged ochre (nominate) or brown (*kuehni*) and belly either rusty ochre (nominate), buffy ochre (*kuehni, examinata*), white (*lineolata*) or white with slight ochre tinge (*cinerascens*) (White & Bruce 1986, Boles 2007). Female *johni* is also distinctive, being similar to the male, albeit duller and with black streaks on the breast.

The song of *johni*, previously undescribed, was heard several times and sound-recorded once. It includes whistling strophes, of 0.5–2.0 seconds, comprising 3–10 varied notes delivered at 1.7–5.5 kHz, which produce a varied tuneful song (Fig. 14A). A preliminary comparison reveals that it differs markedly from *P. g. griseonata* on Seram (Fig. 14B–C), *P. g. examinata* on Buru (Fig. 14D–E) and *P. g. cinerascens* on Halmahera (G. Wagner, www.xeno-canto.org/23102), which mainly utter monotonous phrases. It also differs from the unique sample from Peleng, possibly attributable to *P. g. lineolata* (B. Demeuleemester, avocet.zoology.msu.edu/recordings/12430), and to at least some of the vocalisations described for *kuehni* on the Kai Islands (Coates & Bishop 1997). Based on plumage and song, we support the view (Hartert 1903a, Gill & Donsker 2012) that *johni* should be regarded as a species and recommend comprehensive morphological and acoustic studies of the *P. griseonata* complex as it might reveal the presence of other species-level taxa.

HAIR-CRESTED DRONGO *Dicrurus hottentotus guillemardi*

Common in various habitats below 400 m including small patches of degraded forest mixed with coconut plantations. Much scarcer at higher elevations, with only four records at 800–1,220 m. Our records significantly extend the altitudinal range on Obi, where it was previously unrecorded above 800 m (Coates & Bishop 1997). *D. h. guillemardi* is endemic to Obi and Bisa (Coates & Bishop 1997). It is one of many allopatric forms of *Dicrurus* in the Philippines–Wallacea–New Guinea that are currently lumped in one of two polytypic species, Hair-crested and Spangled Drongos *D. bracteatus*. However, important morphological, behavioural or vocal variation among these numerous forms suggest that more detailed study might identify 'new' species (Rheindt & Hutchinson 2007, Rocamora & Yeatman-Berthelot 2009, Rheindt *et al.* 2010). Future visitors to Obi and Bisa should concentrate on obtaining good recordings of the vocalisation of *D. h. guillemardi* as these would be useful for a reappraisal of the taxonomy of the *D. hottentotus / bracteatus* complex

NORTHERN FANTAIL *Rhipidura rufiventris obiensis*

Commonly recorded from sea level to 1,210 m with most records in degraded forest and edge. Our records significantly extend the upper altitudinal range on Obi as it was not previously recorded above 550 m (Coates & Bishop 1997). *R. r. obiensis* is restricted to Obi and Bisa. *R. rufiventris* exhibits discrete variation between islands not following clinal trends; its taxonomy is complicated and unclear, and it has been suggested that DNA analysis might conclude that many races warrant species status (Rheindt & Hutchinson 2007). *R. r. obiensis* has a distinctive combination of plumage features not shared by any neighbouring populations of *R. rufiventris* in Wallacea, including broad white fringes to the secondaries and broadly white-tipped outer rectrices (Boles 2006).

RUFOUS FANTAIL *Rhipidura rufifrons torrida*

Only five singles and one record of a pair, all restricted to a narrow altitudinal zone at 760–1,000 m, at sites D and E (MT & WP). The range of *R. r. torrida* includes Halmahera,

Ternate, Bacan and Obi. Our observations apparently constitute the first records on Obi since one collected by Waterstradt in 1902 (Hartert 1903a) and there were no previous data on the elevational range on Obi (Coates & Bishop 1997, White & Bruce 1986).

MOLUCCAN MONARCH *Symposiachrus bimaculatus diadematus*
The *diadematus* subspecies of this northern Maluku endemic is restricted to Obi and Bisa. Observed at 260–1,030 m, with all but one record above 700 m. Widespread in second growth and forest edge, usually associating with mixed-species flocks. The occurrence of *M. trivirgatus* is already well known in the lowlands of Obi, where it was most recently reported by Linsley (1995). Our survey, however, extends the altitudinal range for the species, as it is reported to just 850 m on Halmahera (Poulsen & Lambert 2000).

MOLUCCAN FLYCATCHER *Myiagra galeata galeata*
Recorded in forest edge, secondary forest and scattered trees near coconut plantations, from sea level to 870 m. Moderately common in the lowlands of Obi, but no published data concerning its upper altitudinal limit (Lambert 1994, Linsley 1995, Coates & Bishop 1997).

SHINING FLYCATCHER *Myiagra alecto alecto*
Seen nine times and heard once. Most records were between sea level and 600 m, but also seen at 750 m and 850 m. Mostly observed near rivers and forest edge, but one in a dry gully in secondary forest at 750 m. Although *P. alecto* is mentioned from the lowlands of Obi (Linsley 1995), our records provide the first data on its upper elevational limit.

PARADISE CROW *Lycocorax pyrrhopterus obiensis*
Very common from sea level to 1,220 m in a wide range of habitats including small patches of degraded lowland forest mixed with coconut plantations and primary montane forest. Our records significantly extend the altitudinal range on Obi, where it was previously unknown above 800 m (Lambert 1994, Linsley 1995). *L. p. obiensis* is very distinct from both the nominate and *morotensis* in plumage and measurements (Frith & Beehler 2006) and has already been considered close to deserving species status (Cracraft 1992). It is also more manucode-like in appearance (Lambert 1994; pers. obs.) and its vocalisation includes several frequently delivered distinctive calls not given by the nominate, as previously described by Lambert (1994). Research on the degree of insular differentiation and on the evolution of local dialects was recommended by Frith & Beehler (2006).

NORTHERN GOLDEN BULBUL *Thapsinillas longirostris lucasi*
Commonly recorded in primary forest, logged forest and forest edge, at 260–1,210 m, significantly extending the altitudinal range on Obi, where it was previously unknown above 800 m (Coates & Bishop 1997). Golden Bulbul is a poorly studied group endemic to Wallacea, where it is represented by nine recognised taxa. Fishpool & Tobias (2005) recently split the group into two species, namely Northern Golden Bulbul *T. longirostris*, which includes six subspecies in northern Maluku, on Obi, Sangihe, Sula, Banggai and Togian islands, and Southern Golden Bulbul *T. affinis*, comprising three subspecies on Buru, Ambon and Seram. Rheindt & Hutchinson (2007) went further in proposing to split *T. affinis* into two species, Buru Golden Bulbul *T. mysticalis* and Seram Golden Bulbul *T. affinis*, which was adopted by Gill & Donsker (2012).

Compared with the subspecies *chloris* (from Morotai to Bacan), which is geographically its closest relative, *lucasi* has very distinctive bright yellowish plumage (whereas *chloris* is markedly greener overall) and an extensive bright yellow loral spot (*chloris* has a dark loral

Figure 15. Northern Golden Bulbul *Thapsinillas longirostris*, with (A) *T. l. lucasi*, Obi, 10 March 2010 (M. Thibault) and (B) *T. l. chloris*, Halmahera, 23 March 2010 (M. Thibault).

spot extending below the eye) (Fig. 15). The bright yellow loral spot is a feature shared by no other form of the Northern Golden Bulbul group except *platenae*, which is restricted to the geographically distant island of Sangihe (Coates & Bishop 1997). *T. l. lucasi* is a fairly vocal taxon that frequently delivers three different call types, permitting many sound-recordings to be made. In addition to whistled *tweeeuip* notes (Fig. 16A) and raucous calls (Linsley 1995), it also gives a distinctive, piercing call comprising 2–3 notes that can be transcribed *pic pic piie* (Fig. 16B). A preliminary comparison was made with incomplete sets of recordings of the *T. affinis / longirostris / mysticalis* complex. These included recordings of *platenae* on Sangihe (F. Verbelen, avocet.zoology.msu.edu/recordings/3347), *aureus* on the Togian Islands (F. R. Lambert, www.xeno-canto.org/90082), *hartertii* on the Banggai Islands (F. R. Lambert, www.xeno-canto.org/95775, www.xeno-canto.org/95360, F. Verbelen, avocet.zoology.msu.edu/recordings/3344), *longirostris* on Taliabu (D. Verbelen, avocet.

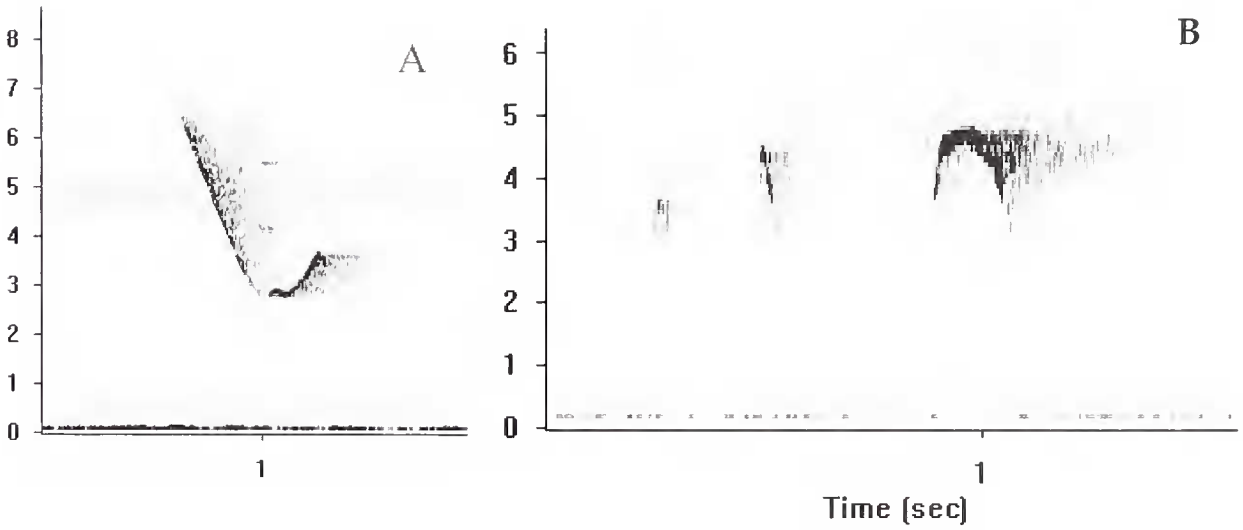


Figure 16. Sonograms of Northern Golden Bulbul *Thapsinillas longirostris lucasi*, with (A) whistled *tweeeuip* calls, (B) *pic pic piie* calls, Obi, March 2010 (M. Thibault). X-axis = time (one second per tick), y-axis = frequency (1 kHz per tick).

zoology.msu.edu/recordings/7821), *affinis* on Seram (F. R. Lambert, avocet.zoology.msu.edu/recordings/4805, avocet.zoology.msu.edu/recordings/4806) and *mysticalis* on Buru (G. Wagner, www.xeno-canto.org/42281, F. R. Lambert, http://avocet.zoology.msu.edu/recordings/4147). Recording of *chloris* (from Morotai to Bacan) were unavailable, but its vocalisation is described as 'a rapid and repetitive chatter of semi-musical, moderately high pitched notes' of 6–8 seconds duration (Coates & Bishop 1997). From these recordings and the description of *chloris*, no vocalisation comparable to those we recorded of *lucasi* could be found. Based on our preliminary comparisons, we suggest that *lucasi* is best regarded as a species. Further studies may evidence that *T. longirostris* comprises several other species-level taxa, as suggested by Rheindt *et al.* (2010).

UNIDENTIFIED MARTIN *Riparia riparia / diluta*

On 20 March 2010, a single *Riparia* sp. was seen at very close range in a flock of Barn Swallows *Hirundo rustica* in Laiwui town (PDR & OP). The bird perched for several minutes on an electric wire just above the observers. It was approximately one-fourth smaller than the Barn Swallows perched beside it and had dark sandy brown upperparts and top of the head, and a concolorous collar on its upper breast. The rest of the underparts, including throat and chin, were creamy white. Its tail appeared relatively short and slightly forked with the outer tail feathers having a rounded aspect. It took flight after a few minutes and was not seen again. Despite the prediction by Coates & Bishop (1997) that *R. riparia* might be recorded in Wallacea, we have failed to find any record in the literature, with the exception of a *R. riparia* on Karakelong, Talaud Islands, on 8 November 2011 (Robson 2012). Our record is apparently the first for Wallacea of the *R. riparia / diluta* species group. Based on several features, including (a) absence of pale grey tone to the upperparts and breast-band coloration, (b) solid, contrasting and complete dark beige-brown breast-band, (c) absence of any particular contrast, greyish tinge or paleness on the head, (d) whitish throat contrasting with dark beige-brown ear-coverts and lores, and (e) slight but clear tail fork, we believe it was possibly a Sand Martin *R. riparia* rather than a Pale Sand Martin *R. diluta*. Overall size and depth of the tail fork are of limited use on a lone vagrant (Loskot 2006, Schweizer & Ayé 2007). Identification in the field of eastern forms of both species is an unresolved issue in South-East Asia (http://digdeep1962.wordpress.com/), also because the winter range of Pale Martin is poorly known. Whereas Pale Martin is regularly recorded in winter only in Hong Kong (http://digdeep1962.wordpress.com/), eastern Myanmar and eastern Tonkin (Robson 2008), Sand Martin is more widespread in South-East Asia in the non-breeding season (Robson 2008) and is a rare but regular winter visitor to Borneo (MacKinnon & Phillips 1993, Myers 2009) and the Philippines (Kennedy *et al.* 2000, Allen *et al.* 2006). It is also a straggler to Papua New Guinea (Coates & Peckover 2001). In view of this pattern of occurrence in the Oriental and Australasian regions, Sand Martin is therefore more likely to be recorded in Wallacea. Elsewhere in Indonesia it has been recorded only in Kalimantan (http://burung-nusantara.org/birding-indonesia/checklist-birds-of-indonesia/).

BARN SWALLOW *Hirundo rustica*

Several seen at close range in Laiwui on 20–21 March 2010 (all observers). Easily separated from Pacific Swallow *H. tahitica* by the combination of long outer tail-streamers and dark chest contrasting with very pale creamy-white underparts. This northern migrant was previously unrecorded on Obi, although its presence is unsurprising given that it is 'likely to occur anywhere in Wallacea' (Coates & Bishop 1997).

ISLAND LEAF WARBLER *Phylloscopus poliocephalus waterstradti*

We recorded this taxon at 360–1,210 m, in primary and logged forest, most commonly above 800 m. *P. p. waterstradti* is endemic to Bacan and Obi and very little is known of its ecology except that it was previously recorded above 550 m on Obi (Lambert, 1994) and at 1,500–2,100 on Bacan (Coates & Bishop 1997). Our records significantly extend the altitudinal range on Obi and suggest more important range distinctions between Obi and Bacan.

The vocalisation of *P. p. waterstradti* has not been previously described. Several sound recordings were obtained (Figs. 17A–B). Songs comprise various trilling strophes lasting 1.1–2.2 seconds delivered every 1.4–3.6 seconds. Strophes are most frequently introduced by a single, lower pitched element at 3.0–6.5 kHz. Main trills are level or rising, at 3.5–9.0 kHz and include repeated inverted-V notes or inverted-V notes alternated with bell-shaped or more complex notes. These are somewhat reminiscent of the trilling song described for *P. p. ceramensis* on Seram (Rheindt & Hutchinson 2007; T. Mark, www.xeno-canto.org/122063), but the latter also gives more complex phrases alternating between rising and descending series (M. Catsis, www.xeno-canto.org/38412) that were not heard on Obi. The song of *P. p. waterstradti* is also close to *henrietta* of Halmahera (Fig. 17C), but distinctly faster and higher pitched. Our recordings of *waterstradti* differ markedly from those of all other *P. poliocephalus*

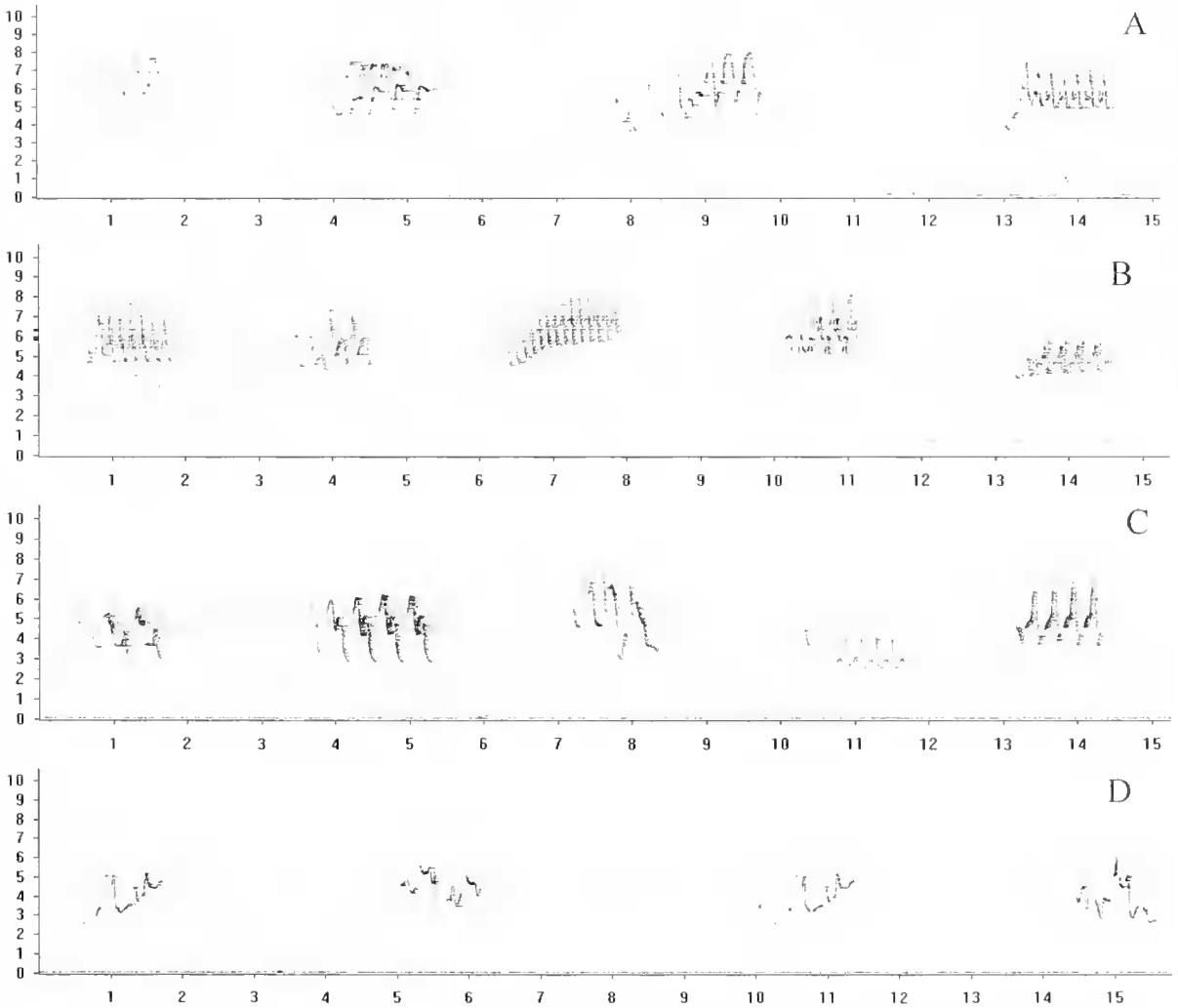


Figure 17. Sonograms of songs of (A–B) Island Leaf Warbler *Phylloscopus poliocephalus waterstradti*, Obi, March 2010 (M. Thibault), (C) *P. p. henrietta*, Halmahera, October 2011 (R. O. Hutchinson), (D) *P.* (*poliocephalus*) taxon novum, Taliabu, December 2012 (R. O. Hutchinson). X-axis = time (one second per tick), y-axis = frequency (1 kHz per tick).

subspecies for which recordings or sonograms are available, i.e. *everetti* on Buru (Rheindt & Hutchinson 2007), *avicola* on Kai (F. R. Lambert, avocet.zoology.msu.edu/recordings/5420), *misoriensis* on Biak (B. van Balen, www.xeno-canto.org/75914), *giulianettii* from central and south-east New Guinea (I. Woxvold, www.xeno-canto.org/87539) and *becki* from the eastern Solomons (D. Gibbs, www.xeno-canto.org/70658). The song of *waterstradti* also differs notably from that of 'Taliabu Leaf Warbler' *Phylloscopus* taxon novum (Fig. 17D), recently discovered on Taliabu (Davidson *et al.* 1991, Rheindt 2010) and from 'Peleng Leaf Warbler' *Phylloscopus* taxon novum (F. Lambert, www.xeno-canto.org/95794), recently discovered on Peleng (Rheindt *et al.* 2010), but is reminiscent in structure to some variant trilling songs of *P. sarasinorum nesophilus* from central Sulawesi, although the latter are at a markedly lower frequency (various recordists, www.xeno-canto.org/species/Phylloscopus-sarasinorum). This suggests that *P. poliocephalus waterstradti* might be best treated as a species. However, detailed taxonomic research into the *P. sarasinorum / poliocephalus* complex is needed as it might reveal a number of species-level taxa, as suggested by Rheindt & Hutchinson (2007) and Rheindt *et al.* (2010). Furthermore, a comprehensive study should include vocal comparisons between populations on Obi and Bacan.

CREAM-THROATED WHITE-EYE *Zosterops atriceps*

This inconspicuous but very vocal white-eye was occasionally seen and commonly heard at 700–1,200 m in primary and logged forest, forest edge and second growth, with records down to 400 m (all observers). Our observations significantly extend the altitudinal range on Obi, where it was previously unknown above 700 m (Coates & Bishop 1997). Surprisingly, it was first recorded on Obi in 1992 when Lambert (1994) found it uncommon and stated that 'the birds most closely resemble the nominate subspecies of Bacan with greyish heads contrasting with the bright green upperparts'. From our field experience, white-eyes on Obi show striking variation that might be age-related, including in bill size and throat colour, the latter ranging from creamy white to grey. We failed to notice the greyish tone to the head mentioned by Lambert, but once obtained photographic evidence of the fuscous-olive tinge to the crown typical of nominate *atriceps* (Fig. 18). Vocalisations of birds on Obi have not been described. The song comprises moderately sweet whistles, strongly reminiscent of *fuscifrons* from Halmahera, although apparently more variable in duration (Coates & Bishop, 1997), with phrases ranging up to eight seconds (Fig. 19). A more detailed investigation including morphological, vocal and molecular analyses is required to confirm the taxonomic position of the Obi population.

Figure 18. Cream-throated White-eye *Zosterops atriceps* (*atriceps*?), two different individuals, Obi, 16 March 2010 (M. Thibault); note variation in throat coloration.

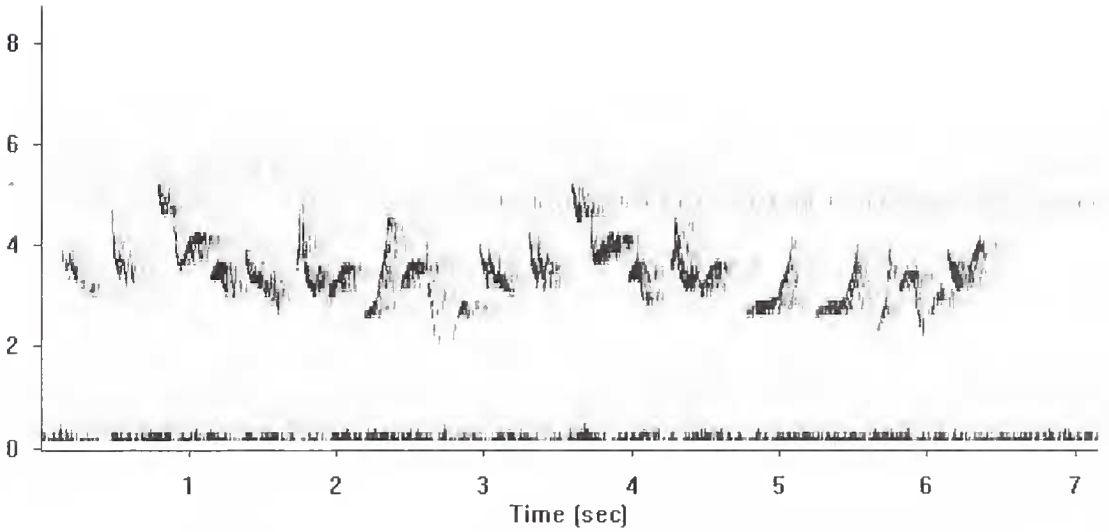


Figure 19. Sonogram of song of Cream-throated White-eye *Zosterops atriceps*, Obi, 14 March 2010 (M. Thibault). X-axis = time (one second per tick), Y-axis = frequency (1 kHz per tick).

TURQUOISE FLYCATCHER *Eumyias panayensis obiensis*
Recorded just twice in logged forest at 800 m at site D and 840 m at site E, with photographs taken by MT. *E. p. obiensis* is endemic to Obi (Coates & Bishop 1997). White & Bruce (1986) traced only two specimens, from 650 m, while Lambert (1994) found it uncommon at 250–700 m, and Linsley (1995) failed to record it. Our observations slightly extend the altitudinal range of this taxon and support the view that it is uncommon.

HALMAHERA FLOWERPECKER *Dicaeum schistaceiceps*
Recorded five times in primary forest, logged forest and edge at 300–1,210 m (all observers). *D. schistaceiceps* is a recent split from *D. erythrothorax* (Rheindt & Hutchinson 2007). Known elevation is 0–710 m on Halmahera (Poulsen & Lambert 2000), 0–950 m on Bacan (Lambert 1994) and 180–400 m on Obi (Lambert 1994). Our observations significantly extend the altitudinal range for this species, and suggest that it is fairly common and rather evenly distributed throughout its elevational range on Obi.

BLACK SUNBIRD *Leptocoma sericea*
Most commonly recorded from sea level to 500 m, less common at 500–1,000 m with one record of two birds at 1,200 m (MT). No previous data concerning elevational range on Obi (White & Bruce 1986, Coates & Bishop 1997).

OLIVE-BACKED SUNBIRD *Cinnyris jugularis*
We provide the first data concerning elevational range on Obi (Coates & Bishop 1997, White & Bruce 1986), with sight records from sea level to 420 m.

EURASIAN TREE SPARROW *Passer montanus*
Common at Laiwui and several at a logging settlement south of Soligi (all observers). Actively expanding its range in Wallacea (C. Trainor pers. comm.), in Maluku it was first recorded on Ambon (around 1900) and subsequently on Buru (1980), Ternate (1992) and Halmahera (1994) (Coates & Bishop 1997). Ours are the first records for Obi and were 40 km distant from each other, suggesting that the species may now be widespread and well established in the inhabited parts of the island.

Unconfirmed records

MOLUCCAN MEGAPODE *Eulipoa wallacei*

On 15 March 2010, two megapodes were flushed in dense, shrubby vegetation adjacent to a logging track at 940 m at site E (MT & PDR). Both gave only very brief views in taking-off but on the first bird, the whitish undertail and overall two-toned plumage with brown upperparts and dark greyish underparts were seen, suggesting *E. wallacei* and seemingly excluding all *Megapodius* including Dusky Scrubfowl *M. freycinet*, which is the only scrubfowl previously known from Obi and which is more uniform blackish grey without white or brown in the plumage. Moluccan Scrubfowl is near-endemic to Maluku where it is known from many islands including Halmahera, Meiti, Ternate, Bacan, Buru, Boano, Seram, Ambon and Haruku (Coates & Bishop 1997). Outside Maluku it occurs only on Misool Island (West Papua). The lack of previous records from Obi (Coates & Bishop 1997, White & Bruce 1986) seems remarkable given that the island is central to the species' range. The elevation of our observation matches information provided by Coates & Bishop (1997), who mentioned that the species 'inhabits hill and montane forest, generally above c. 750 m'. Lacking previous experience of *E. wallacei* and as we can only provide an incomplete description, we stress that our record should be considered provisional. Future observers should attempt to confirm or refute the species' presence on Obi.

Discussion

We provide the first records since 1982, first data on the vocalisations and basic information on habitat for a very poorly known species of global conservation concern (*Scolopax rochussenii*). These results will be potentially helpful for future research and conservation action. We also present details of five new bird records for Obi, including one (*Myzomela chloroptera*) that potentially involves an undescribed taxon. Three new records are migrants (including *Riparia riparia / diluta*, a species group new to Wallacea) and one is a new colonist whose presence is linked to anthropogenic habitat change (*Passer montanus*). In addition, another new bird record (*Eulipoa wallacei*) awaits confirmation.

The presence of a population of *M. chloroptera* in Obi fills a geographical gap between *M. c. batjanensis* on Bacan and those populations recently discovered on the Banggai (Rheindt *et al.* 2010) and Sula islands (Davidson *et al.* 1991). This record pertains to a generally montane species previously unnoticed possibly because most field workers have operated mainly in the lowlands, although recent colonisation is not fully excluded.

The occurrence of a species not mentioned in recent publications despite evidence of earlier collectors is confirmed (*Columba vitiensis*) and new material supportive of the presence of a resident population of *Cacomantis aeruginosus* in Obi is presented.

Our field work failed to reveal the presence on Obi of an unambiguous, distinct montane bird community, possibly as a result of genuinely limited and fragmented forest above 800–900 m, as outlined previously for Halmahera (Poulsen & Lambert 2000). While several resident species were only encountered above 700 m (*Columba vitiensis, Myzomela chloroptera, Rhipidura rufifrons, Eumyias panayensis*), they are not considered strictly montane elsewhere in their ranges. However further field work focusing on as yet uncovered elevations (1,200–1,500 m) is needed to confirm our preliminary assessment.

A number of resident landbirds, including two Obi endemics (*Accipiter hiogaster obiensis, Coracina tenuirostris obiensis*), were not encountered by us, suggesting that they are rare or uncommon and / or that they are restricted to the lowlands, where little time was spent.

Our field work uncovered substantial new albeit incomplete data pertaining to the confusing taxonomic placement of several Obi birds. Novel acoustic data are suggestive of biological species status for *Thapsinillas longirostris lucasi* and further support calls to treat *Pachycephala johni* as a species. Field observations and photographs highlight the distinctiveness of *Myzomela obscura rubrotincta*, which we consider deserves species status. Finally, we highlight the need for a taxonomic reappraisal of several other endemic forms, some of which were already mentioned by others. These include *Ducula basilica obiensis*, *Eos squamata obiensis*, *Geoffroyus geoffroyi obiensis*, *Dicrurus hottentotus guillemardi*, *Rhipidura rufiventris obiensis*, *Lycocorax pyrrhopterus obiensis* and *Phylloscopus poliocephalus waterstradti*. Although most of our observations await further taxonomic work, they suggest that the importance of the Obi avifauna at species level has probably been under-estimated.

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